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Bethlehem Lutheran Church: Can a Building Teach?

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MFA thesis

School of the Arts
Virginia Commonwealth University

This is to certify that the thesis project prepared by David Tyler Bland, Jr. entitled "The Bethlehem Music School: Can a Building Teach?" has been approved by his committee as satisfactory completion of the thesis project requirement for the degree of Master of Fines Arts.

Camden Whitehead, Advisor, Dept. Of Interior Environments, School of the Arts *date*

Christiana Lafazani, Reader, Director of Graduate Studies Dept. Of Interior Environments, School of the Arts *date*

Dr. Sharran Parkinson, Chair, Dept. Of Interior Environments, School of the Arts *date*

Jack Risley, Associate Dean *date*

Dr. F. Douglas Boudinot, Dean of Graduate School *date*

Thank You

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Rob Ventura
Dr. Sharran Parkinson
My class, the class of 2011
Mary Anne Tredway and Bethlehem Lutheran Church

Abstract

The public school system in America has slowly phased music education out of most students curriculum. Cutting these programs help schools manage their fiscal budget and also keep students in the classroom longer in hopes that the extra time will produce better test scores.

In recent years studies have shown that cutting music programs might not be in the best interest of students, or schools working for better test scores. One such study published in Social Science Quarterly, suggests that "students who participate in music are positively associated with academic achievement, especially during the high school years."

If this study is true, and there is overwhelming evidence that music education helps with academic achievement in other disciplines, then why are our public schools still insisting on cutting music programs? Why are schools not offering alternatives to music education?

I plan to investigate a solution to this problem by designing an after school program for families who see the value in musical education, and who want their student/s to actively participate in music. The location for this after school program will be at what is now Bethlehem Lutheran Church, in the FAN district of Richmond, Va. at the corner of Ryland Ave. and Grace St.

Architecturally the shell of the space is Neo-Gothic. The interior of the sanctuary adheres to the same style while the attached 3 floor rear office space offers little interior architectural references to that style. The office space has the potential to be redesigned to suit the needs of the program while introducing an architectural relationship with the sanctuary.

The potential architectural relationship will be defined by the exploration of the concept "individual" versus "group". This concept will additionally explore the notion of individual parts acting alone or working in conjunction with one another to operate as a whole. These drivers will help guide the design as it relates to music.

Manifesto

I believe that design should be experienced.

Past experiences are the road map of how we react to similar situations in the future. They help define us as individuals.

As music is written to be played and heard, and architecture is designed to be built, it can then be understood that there is a certain pattern of design - an action and reaction.

There are certain songs that I hear, and even entire albums that can transport me back to an exact time and place in my life. The experience of listening to music can be so vivid for me, that I remember true feelings, smells, and events as if they happened yesterday. Some music I listen to because I long for that past familiarity, and other music I avoid because of a past that I do not wish to revisit.

I believe that without an experience there is no reason to create. Without an experience, how do we know to move forward? What would we learn that would enables us to move forward?

Thesis Statement

Do music education buildings exist only as structures to learn in,
or can these buildings operate as facilitators of music education?

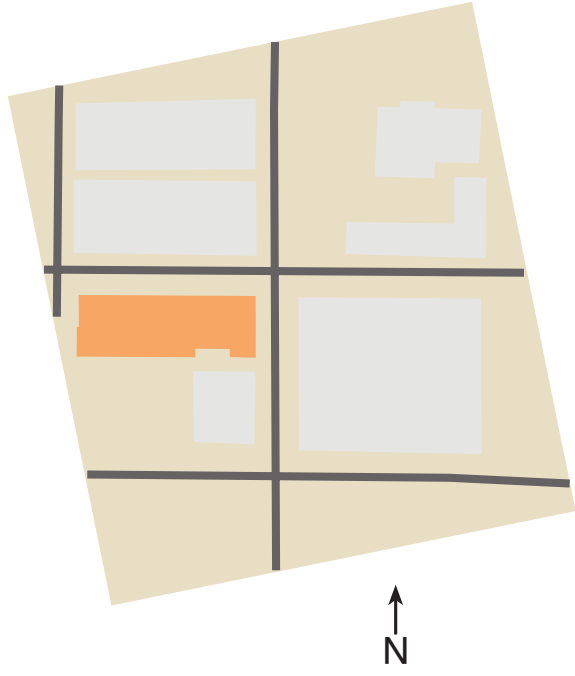
programmatic case studies

13-21

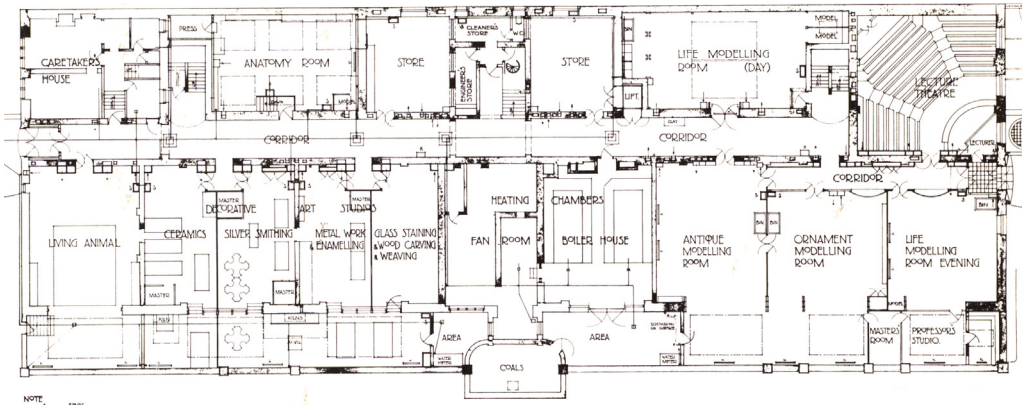
22-28

The Glasgow School of Art

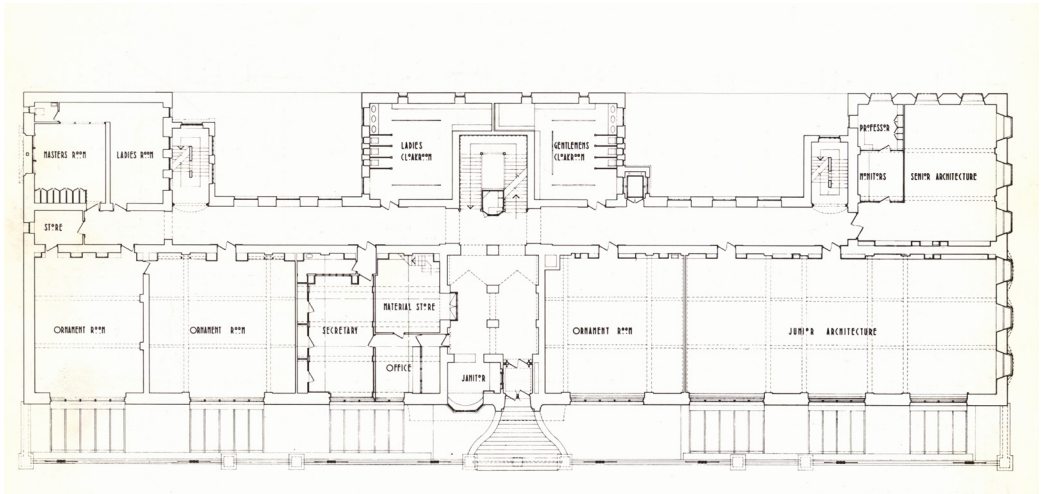
Glasgow, United Kingdom built between 1897 and 1909 by Rennie Mackintosh



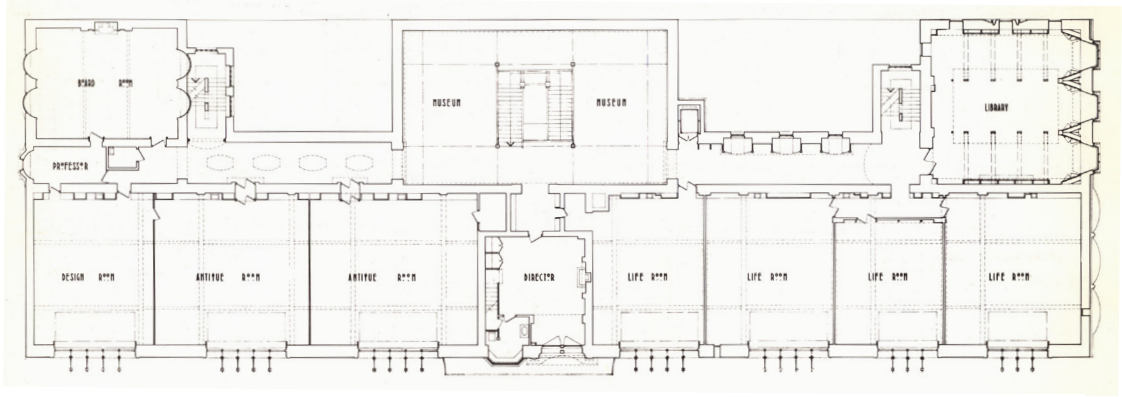
The Glasgow School of Art



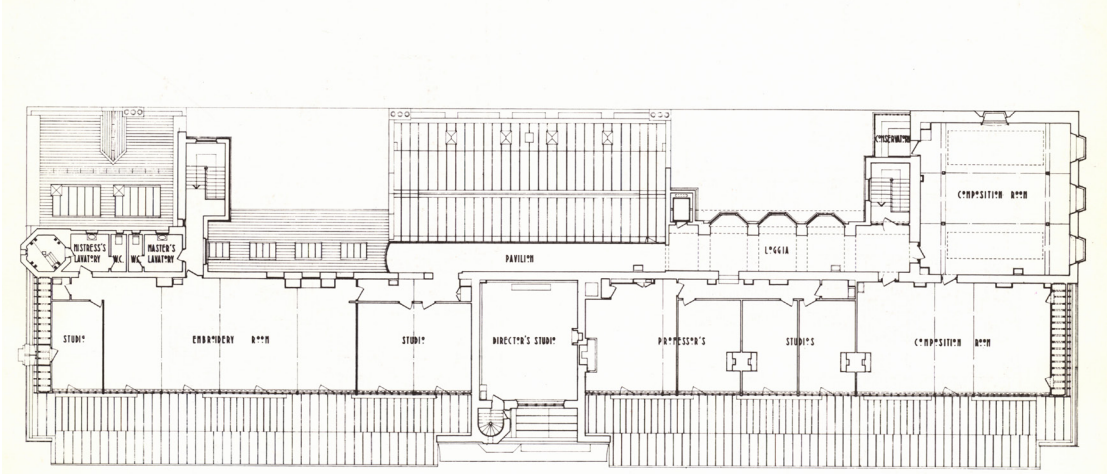
basement



ground floor



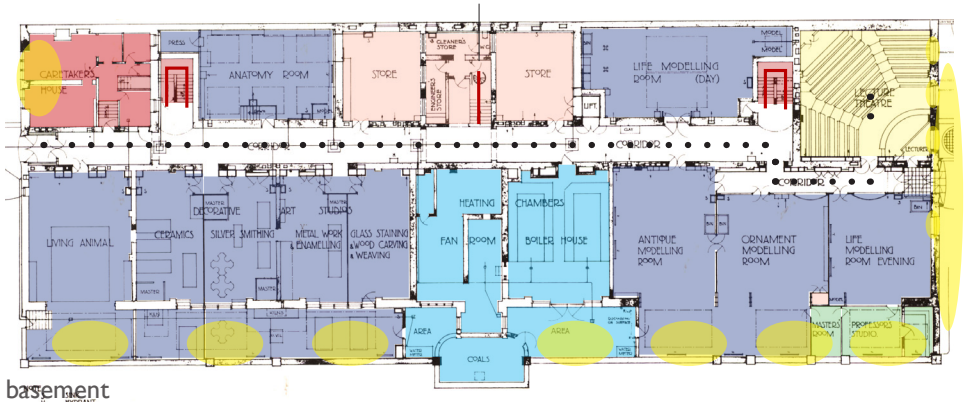
1st floor



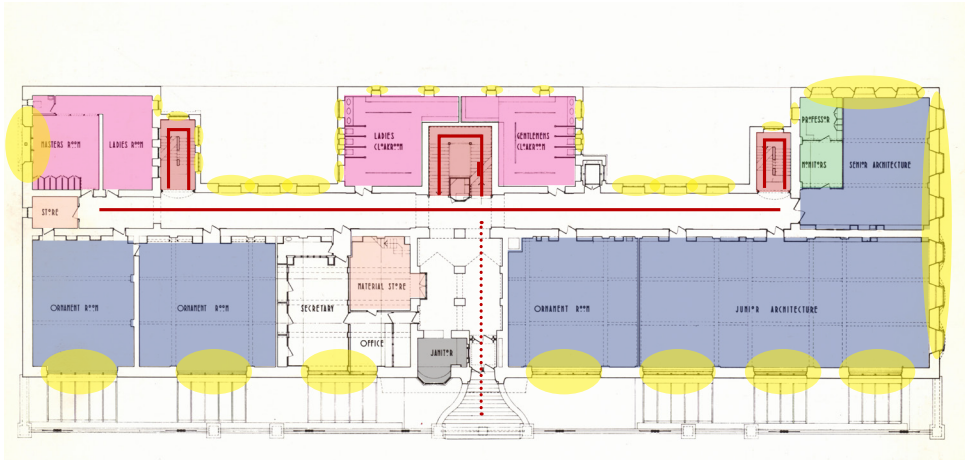
2nd floor

N

The Glasgow School of Art



basement

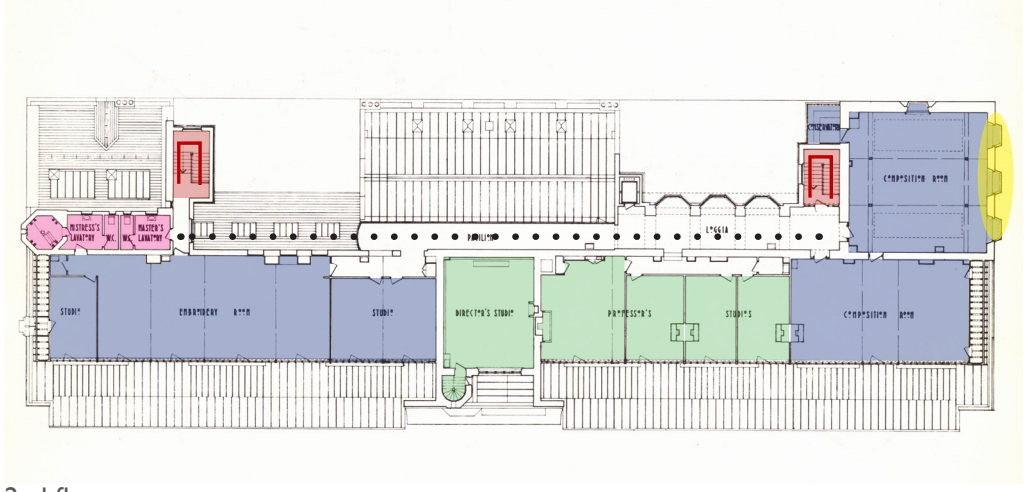


ground floor

- faculty office
- practice space
- equipment
- stairs
- classroom
- museum
- closet
- vestibule
- care taker
- library
- janitor closet

- natural light
- medium traffic
- high traffic
- general traffic

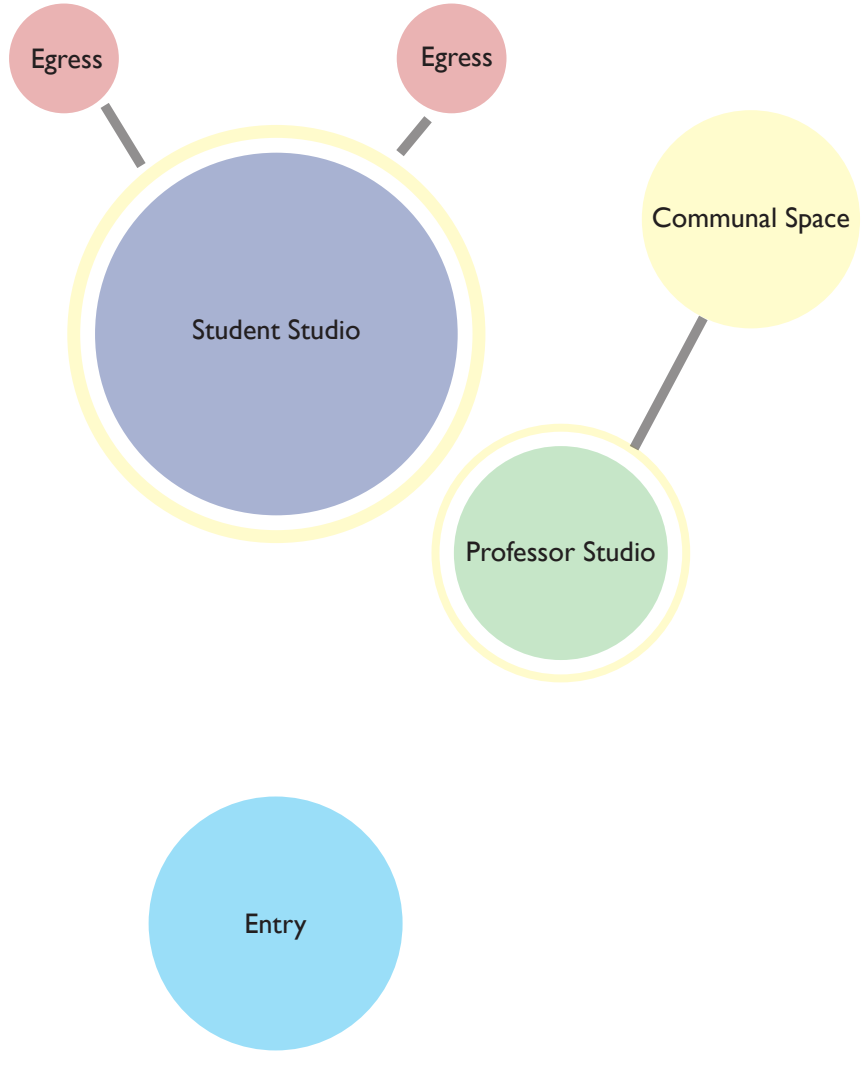
1st floor



2nd floor

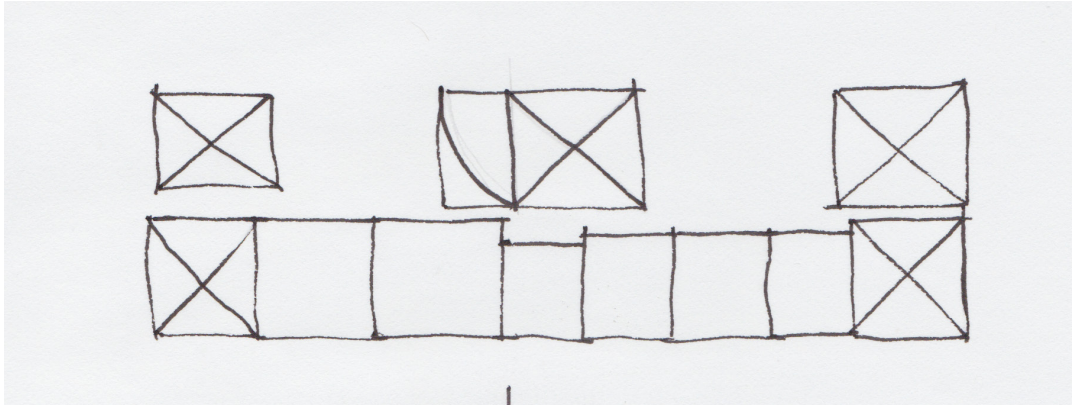
N

The Glasgow School of Art

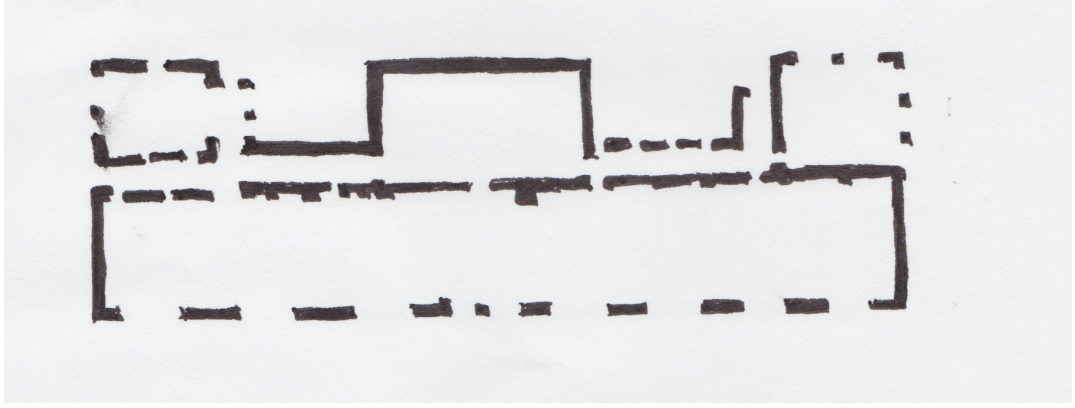


Professor/student interaction is highly encouraged in this relationship diagram and shows that there is an emphasis on student space and work space

All spaces seem to have a large degree of natural light due to the amount of windows on the left, right and front facade of the school. This is important to maintaining a well lit working environment

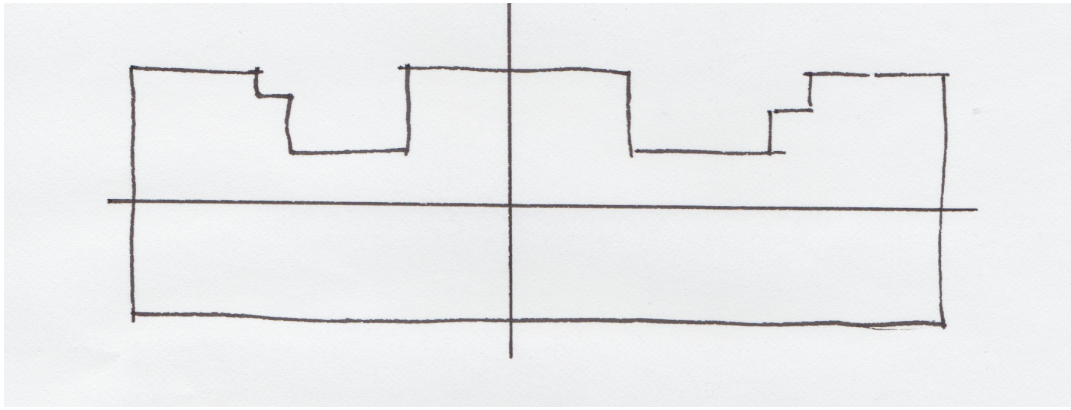


geometry/proportion

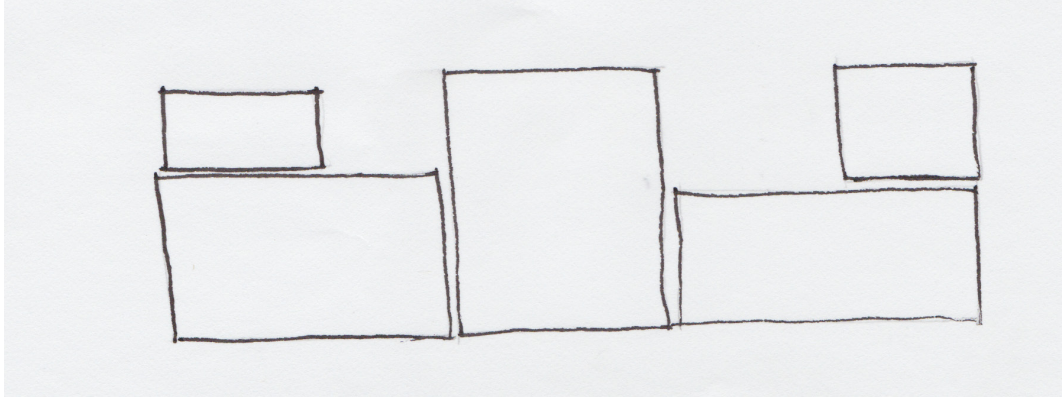


structure

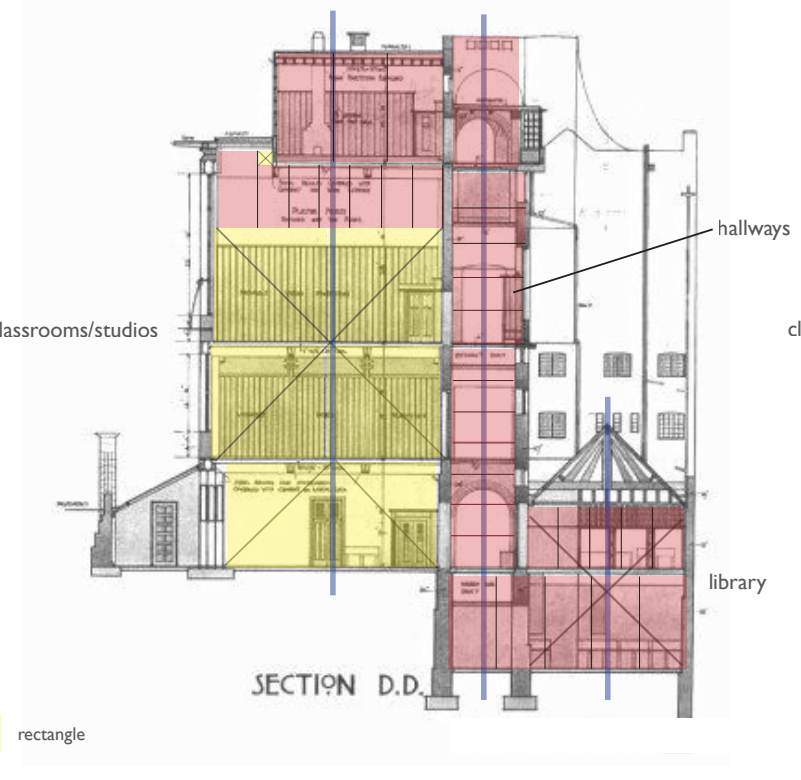
The Glasgow School of Art

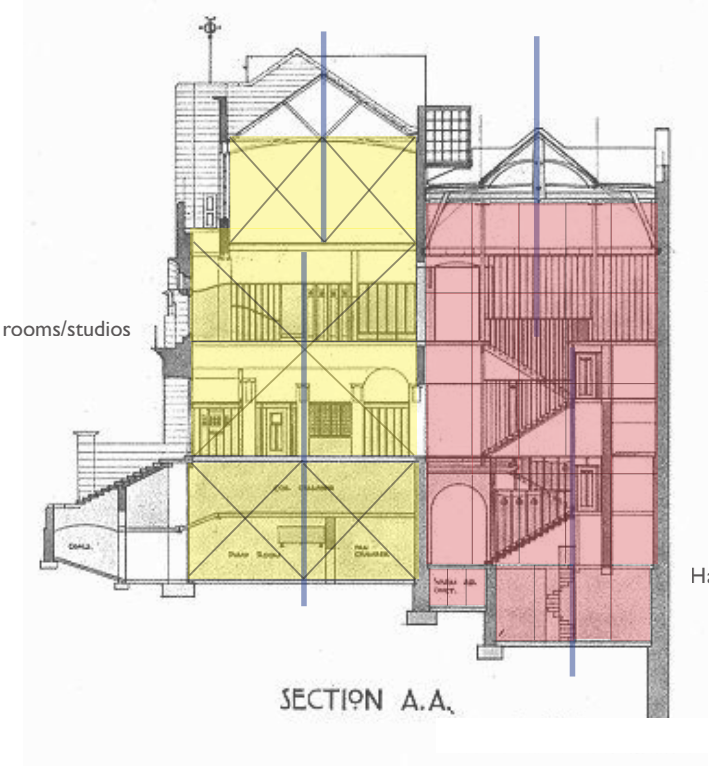


symmetry



massing



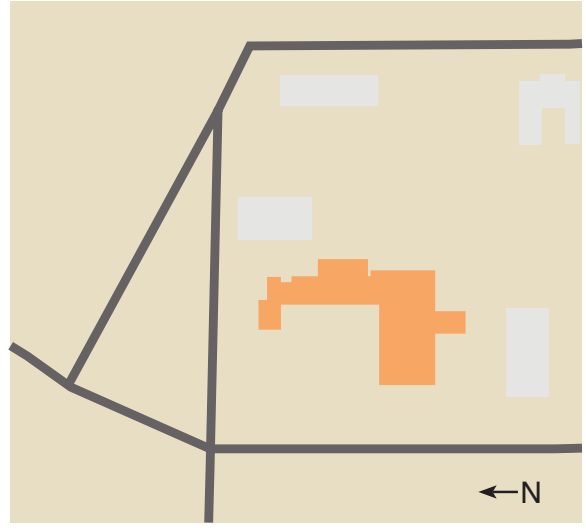


rectangle

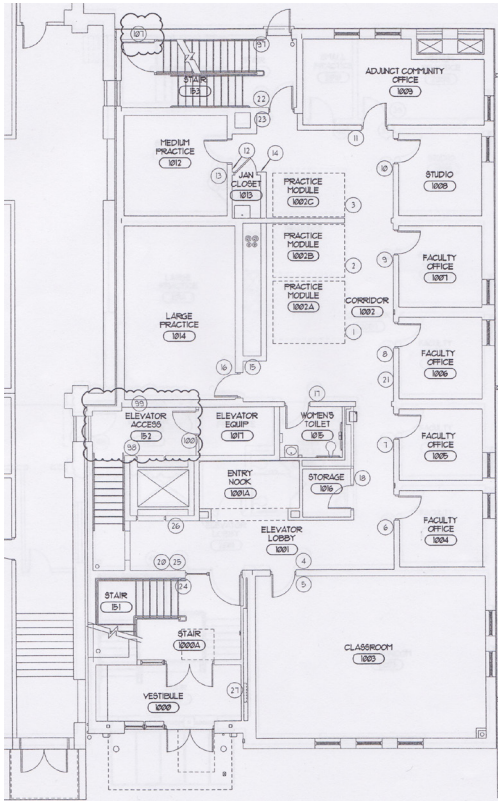
golden rectangle

James W. Black Music Center

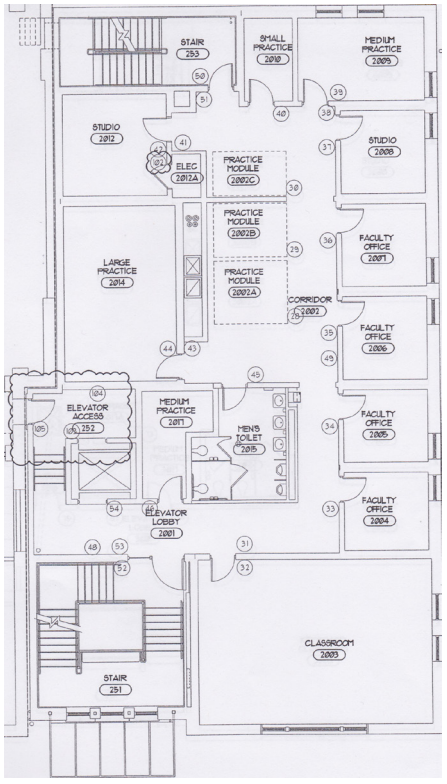
Richmond, Virginia



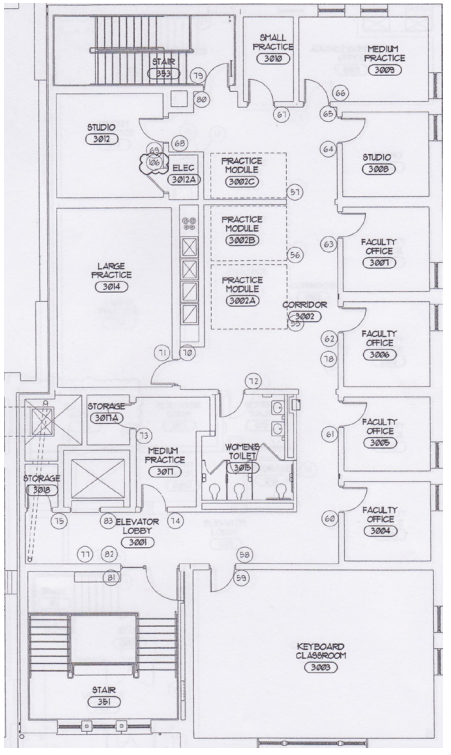
1st floor practice/office side



2nd floor practice/office side



3rd floor practice/office side



300 person recital hall

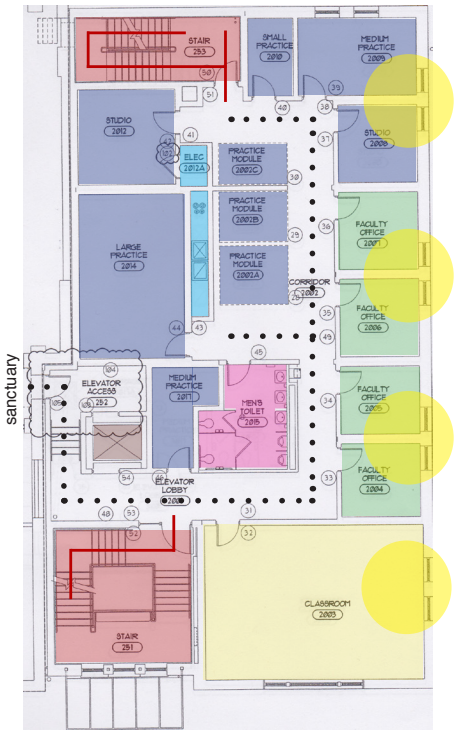
12 faculty offices
3 classrooms (30 students)
6 individual practice spaces
4 medium practice spaces (4-5 person)
2 small practice spaces (1-3 persons)
3 large practice spaces (10-15 persons)
4 studios (lessons)

←N Harrison

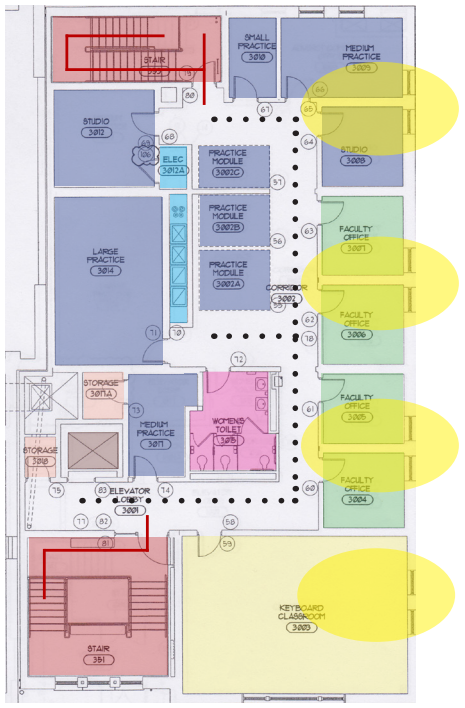
James W. Black Music Center

1st floor practice/office side

2nd floor practice/office side



3rd floor practice/office side



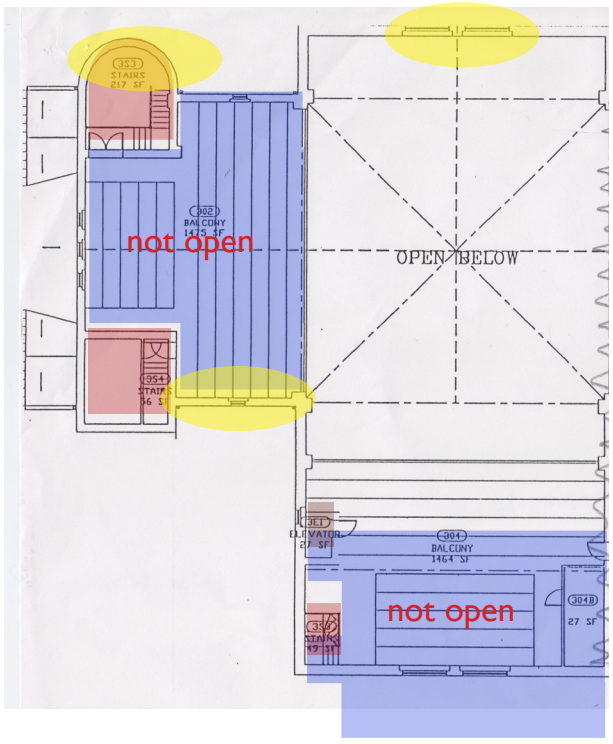
sanctuary

←N Harrison

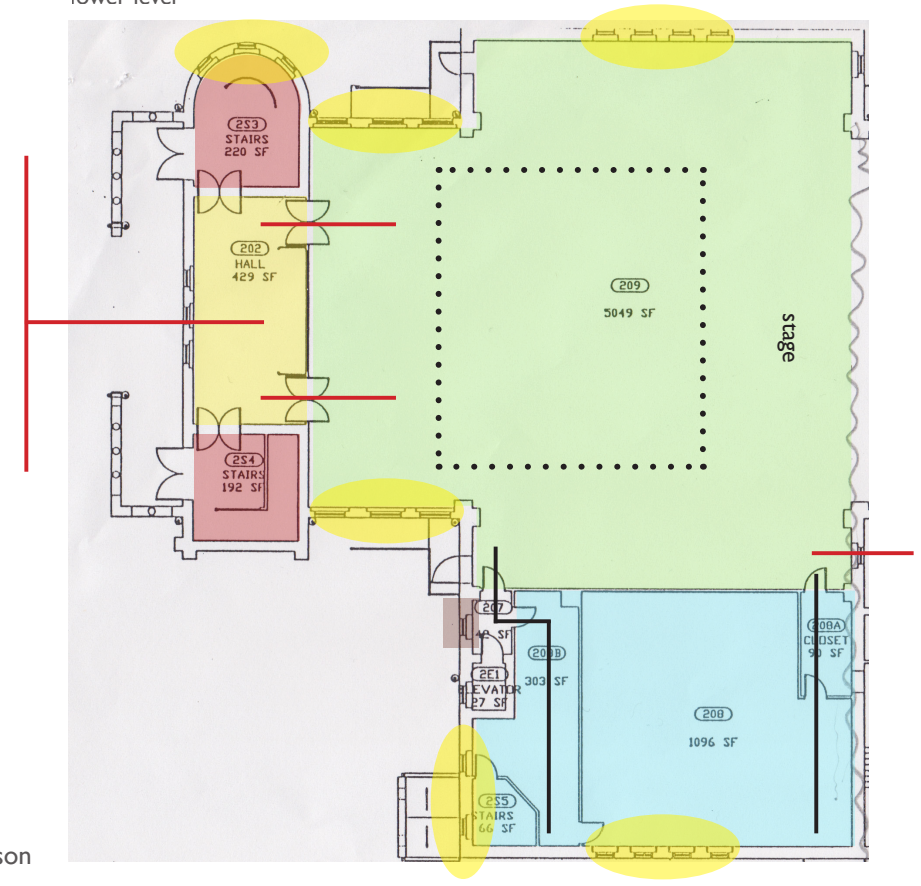
faculty office
practice space
classroom
elevator
lobby nook
equipment
stairs
closet
vestibule
janitor closet

natural light
medium traffic
high traffic
general traffic

upper level



lower level



entrance from practice/office side to theater

← N Harrison

theater

stairs

elevator

storage/preparation

vestibule

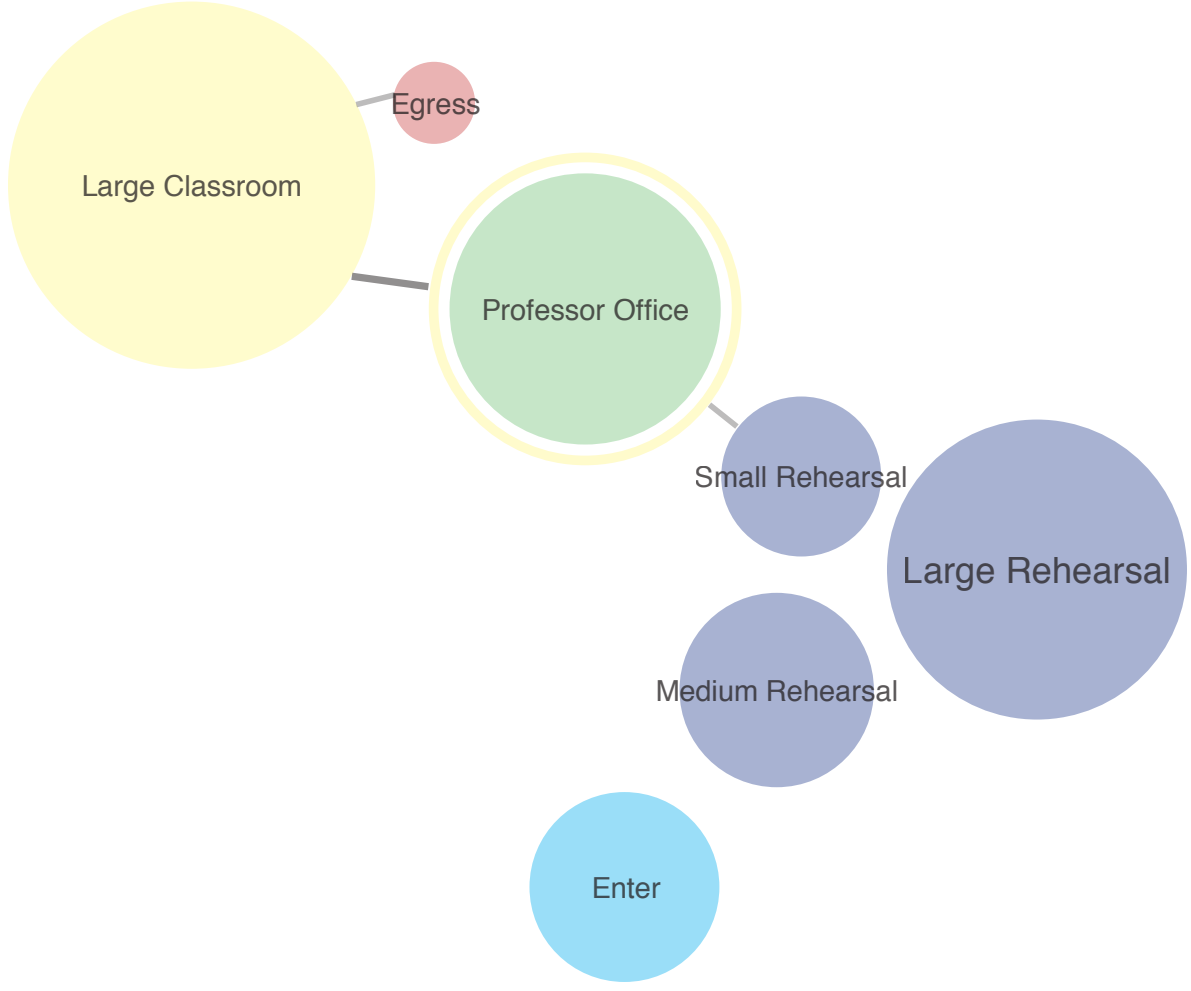
natural light

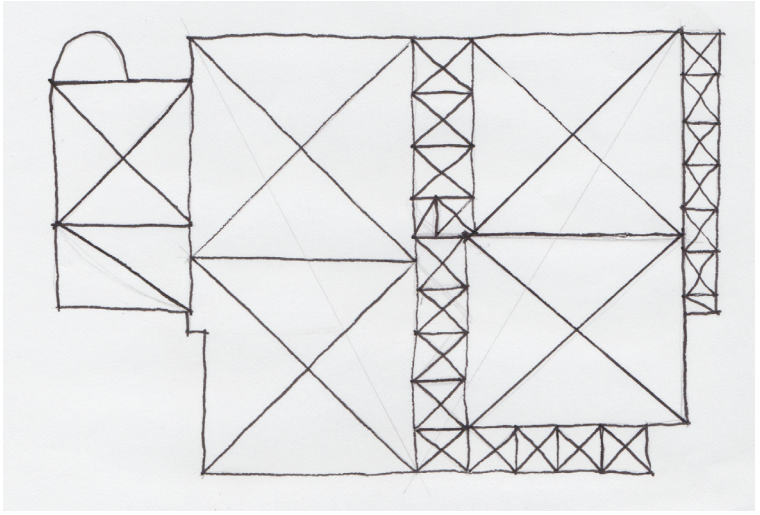
medium traffic

high traffic

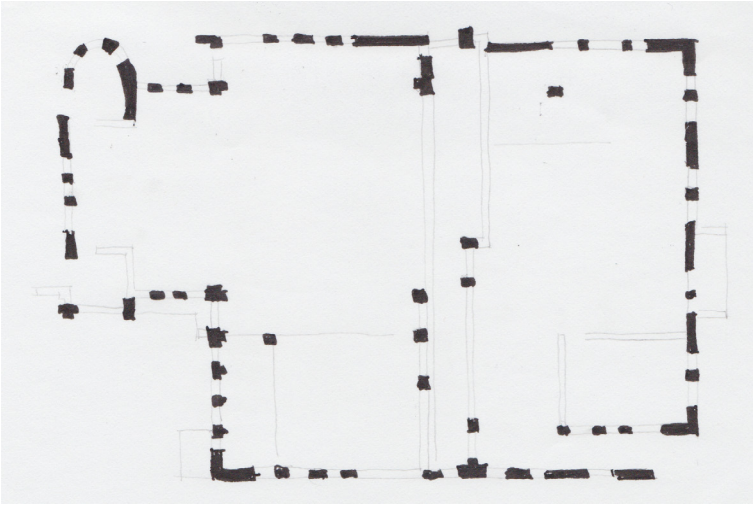
general traffic

James W. Black Music Center

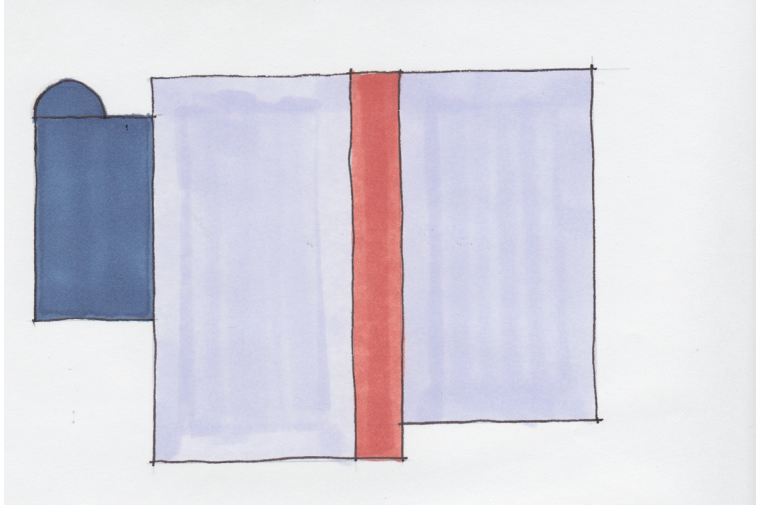




geometry/proportion Harrison



structure Harrison



parti Harrison

←N

context case studies

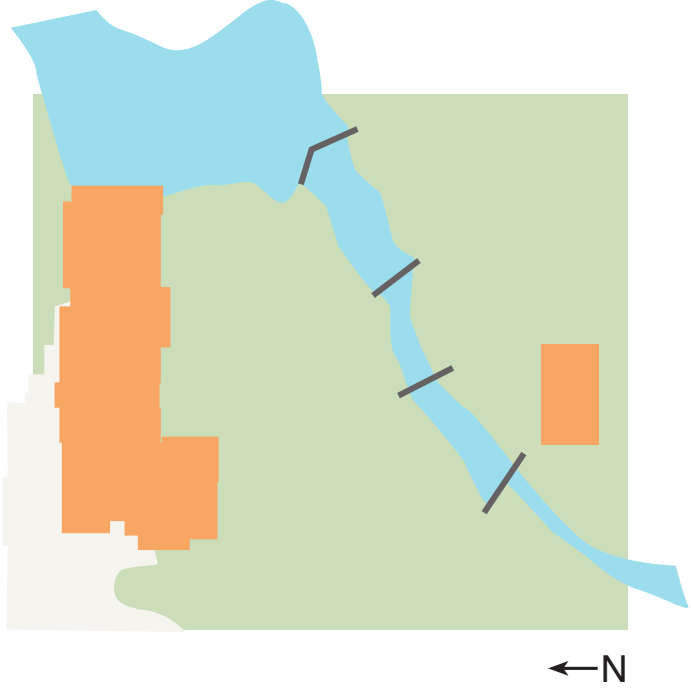
29-34

35-37

context case study

Stretto House

Dallas, Texas built between 1989 - 1992 by Steven Holl



site

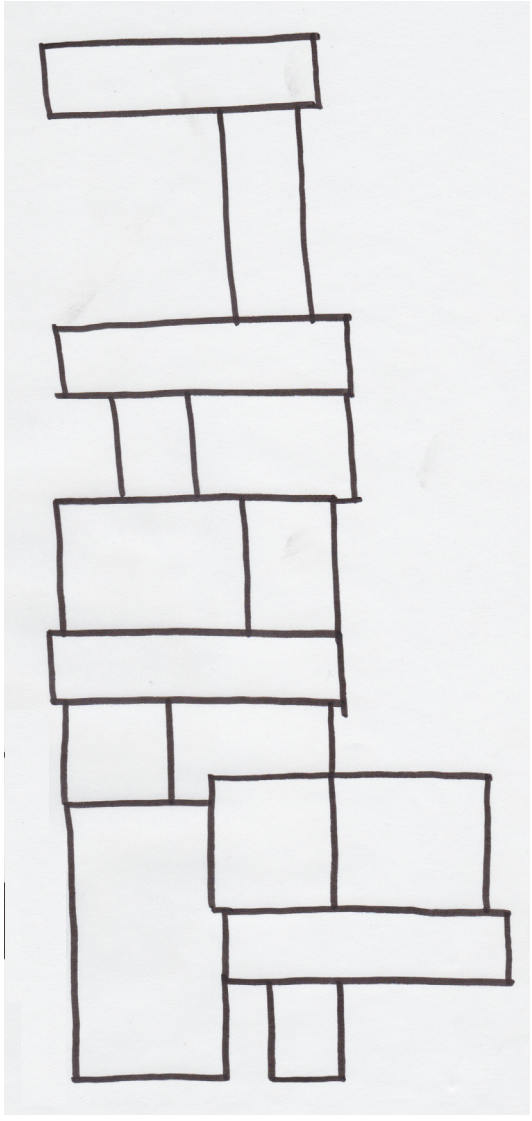
The site is characterized by a river that feeds three ponds on the property. Each pond has a concrete wall that the water falls over and into the river creating a constant murmur of running water

concept

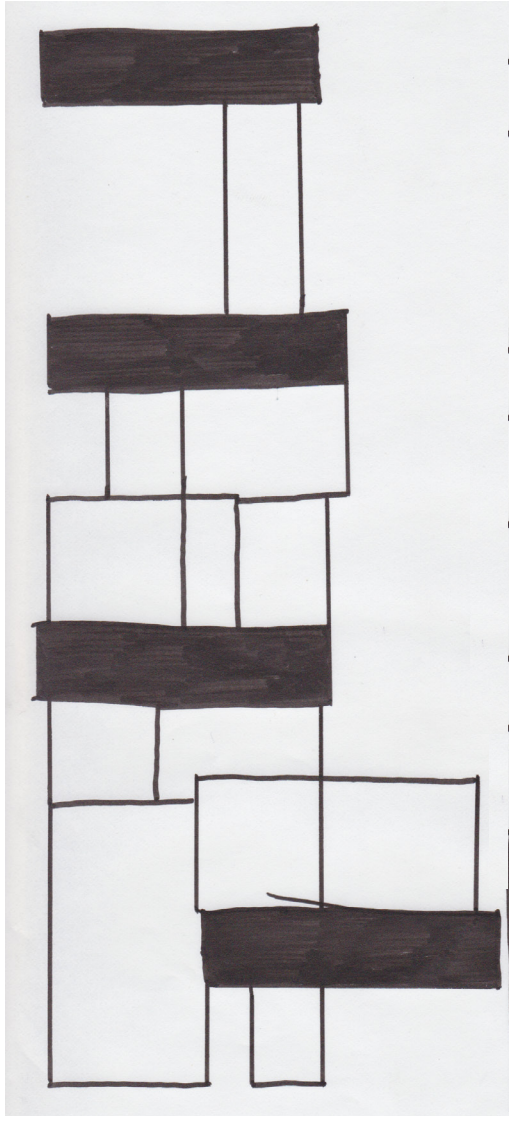
"*Music for strings*" written in 1936 by Hungarian composer, Béla Bartók became the concept for the house. The piece of music was divided into four parts and characterized by overlapping percussions (heavy) and string instruments (light). Powerful flows of rhythmical divisions and irregular tensions made time seem to stand still or to rush forward with irresistible momentum.

Stretto House

1 garage
2 entry
3 art storage
4 living room
5 library
6 study
7 dining room
8 breakfast area
9 kitchen
10 walled garden
11 pool
12 flooded room

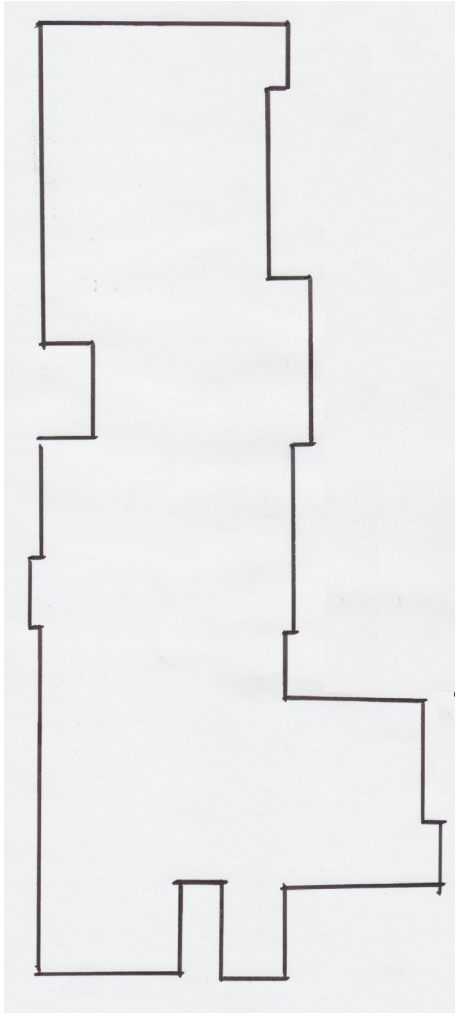


geometry



structure

Stretto House



massing

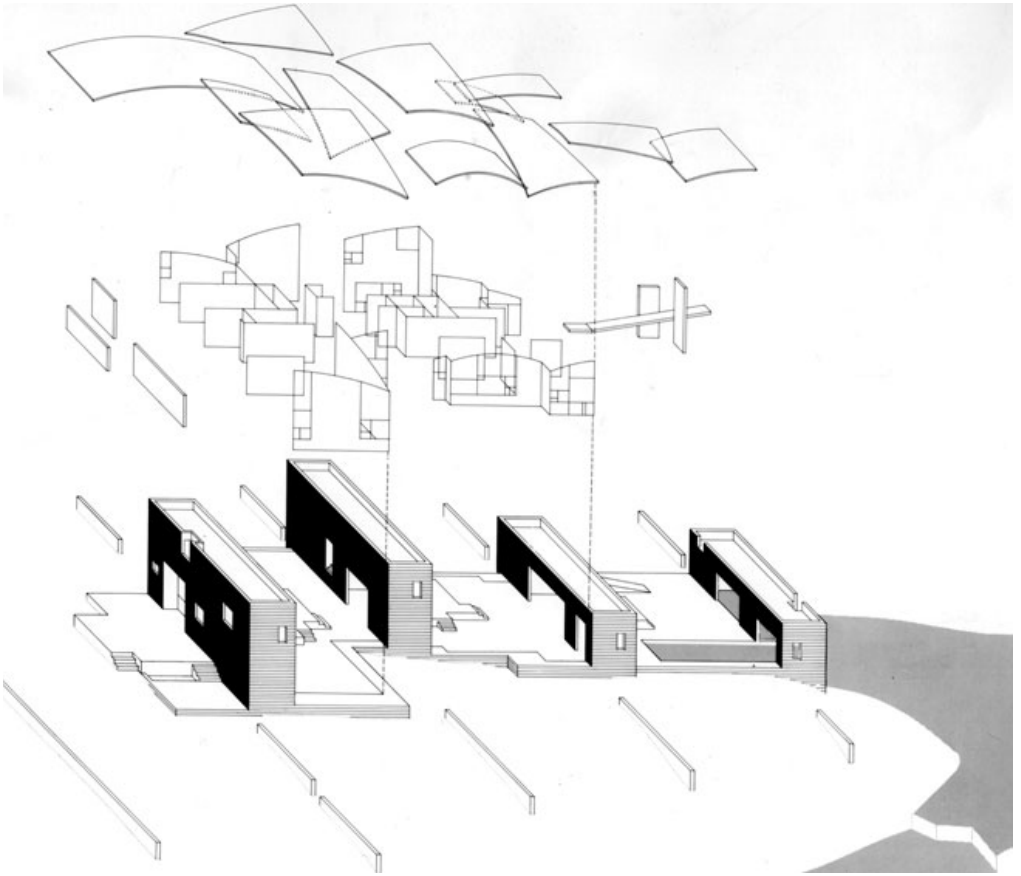
structure

outside space

inside room

structual/room

The Stretto House exemplifies the poetic nature of Holl's architecture, as well as his method of following an initial concept to its fullest realization. The need for protection from the scorching texas sun led Holl to explore the ideas of shadow and overlap; the bold overlapping stretto between heavy percussion and light strings in Bela Bartok's Music for Strings, percussion, and celeste proved fertile for the form and construction of the residence. like Bartok's score, the house has four sections, each consisting of heavy concrete-block "spatial dams" with light metal-roofed "aqueous space" flowing between. Orthogonal floors pull one space through to the next, while curvilinear roofs stretch space over the walls. essential to the sequential balance are rich details and carefully selected materials, including glass slumped or cast in fluid shapes and liquid terrazzo

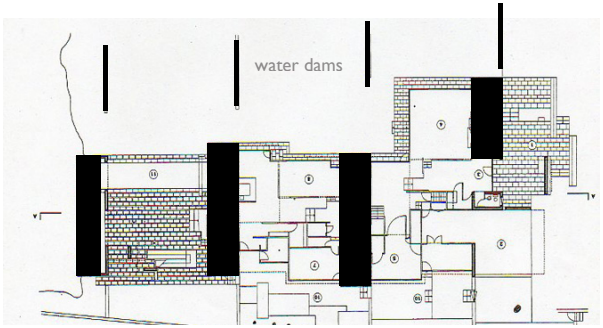


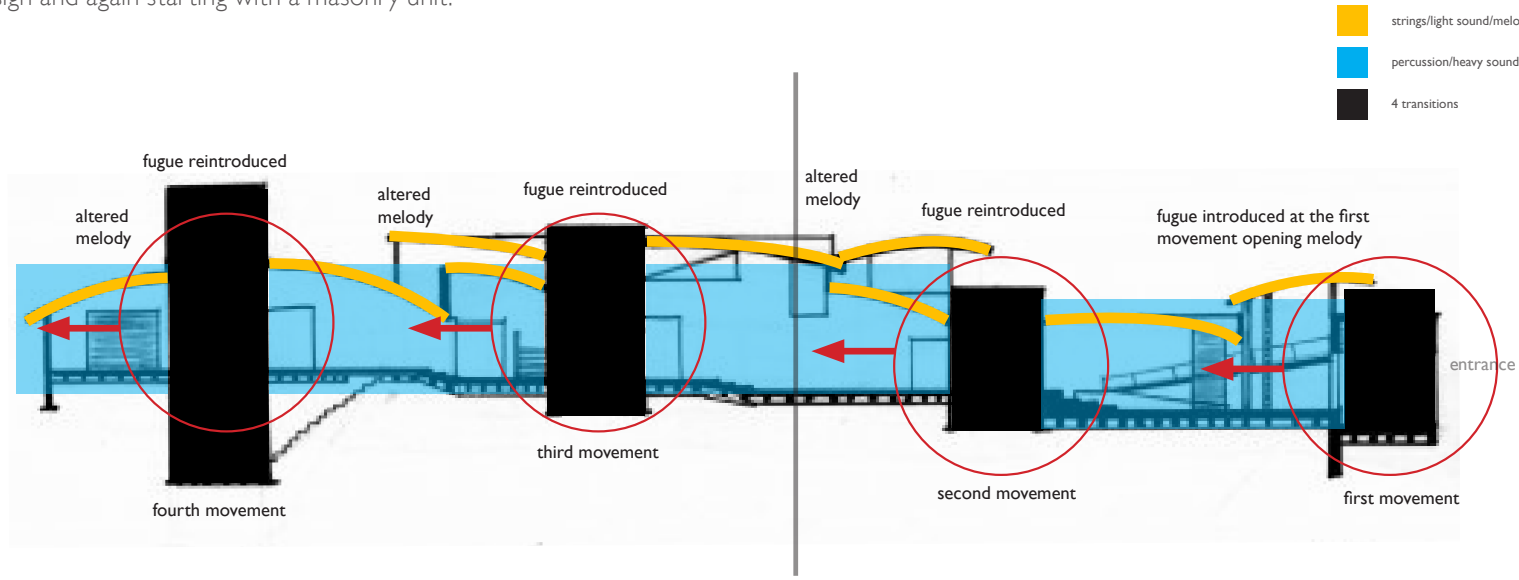
Stretto House

The rectangular masonry units of the Stretto House are in line with the river dams and mimic the transition of the water from one dam to the next. The water flowing over the dams acts as the proverbial "stretto" as it over laps from one movement to the next. The livable space in the Stretto House is each one of these movements. Each space needs each other to exist much like each movement of "Music for Strings" needs each other to exist.

A movement is defined by a self contained part, or section, of a musical composition or form. The performance of a complete work requires all the movements to be performed in succession.

"*Music for Strings*" is broken up into four movements with the first movement being a fugue. A fugue in it's simplest definition is a theme that is introduced during the opening movement of a composition and then reoccurs during every other consecutive movement before the movement finishes (stretto). Holl uses the fugue to begin his design and every other consecutive movement in the Stretto House begins with a masonry unit and is then overlapped into a new room design and again starting with a masonry unit.





Finlandia Hall

Helsinki, Finland by Alvar Aalto

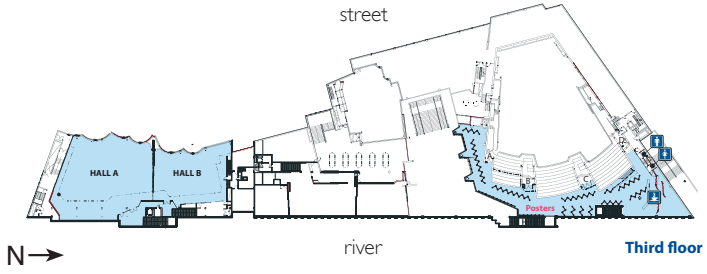
site

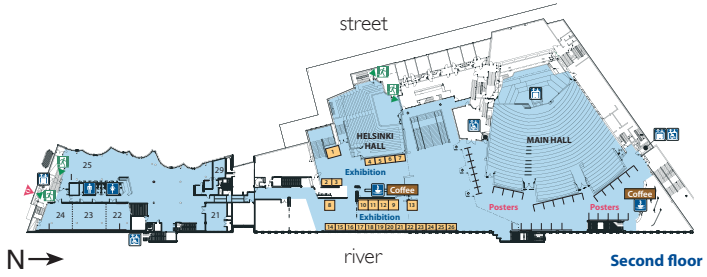
Finlandia Hall exhibits many of the ideas that Aalto experimented with during his lifelong preoccupation with monumental building construction. It is a decoratively conceived composition of cubist forms which constitutes a many faceted whole. None of these elements are, however, purely decorative; Aalto remained faithful to functionalism to the extent that he always sought a practical reason for his forms.

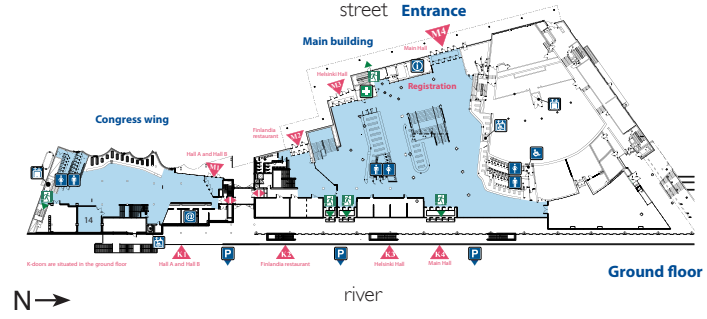
concept

The main idea of Finlandia Hall with it's tower shaped part and inclined roof rising over the whole structure was, as Aalto thought, to improve the acoustics of the concert hall by providing a resonance area overhead creating the kind of acoustic effect that high churches possess. It is unfortunate that this attempt proved in practice to be partially unsuccessful.

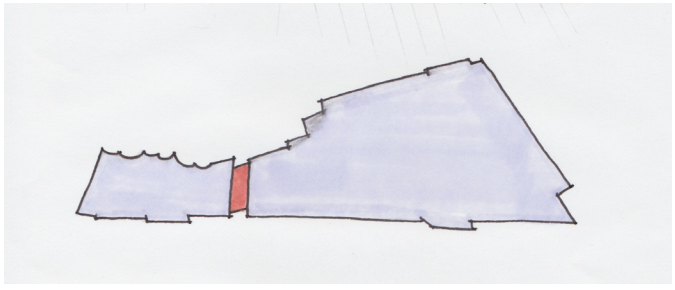
Finlandia Hall



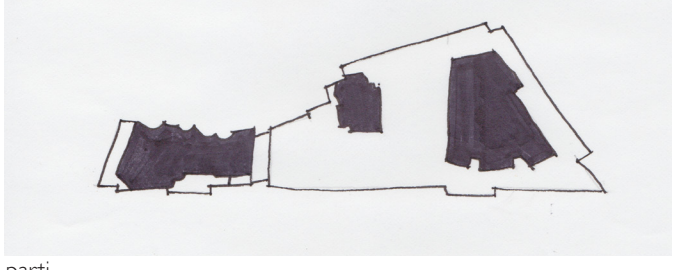




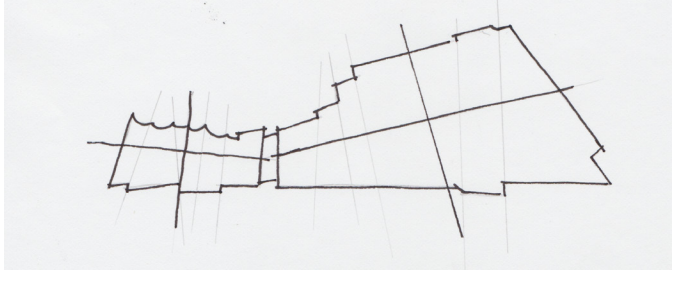
The outside facade facing the street entrance to Finlandia Hall is designed to be less imposing for those walking up while the backside facing the water is more monumental.



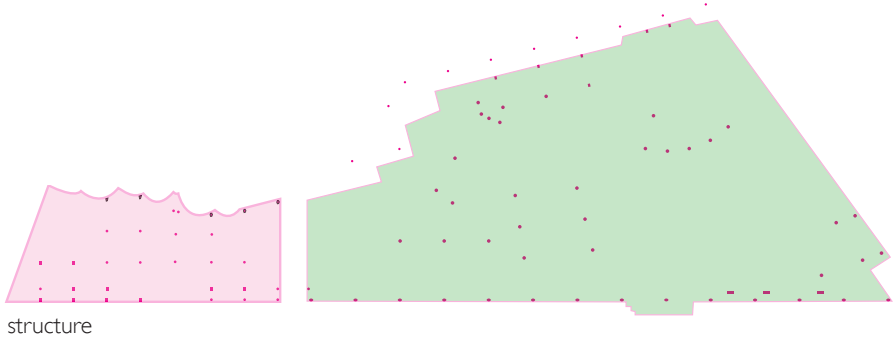
mass



parti



symmetry



structure

process case studies

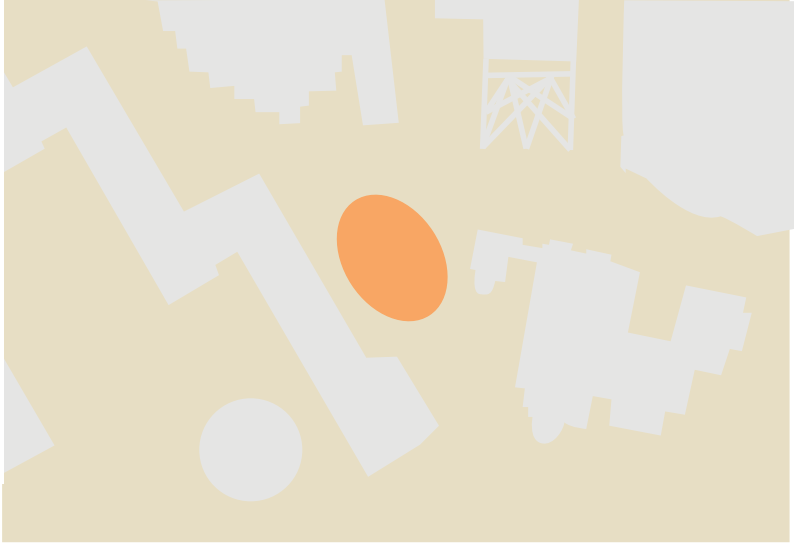
process case studies

39-43

44-48

Phillips Pavilion

World's Fair pavilion designed for Expo '58 in Brussels by le corbusier



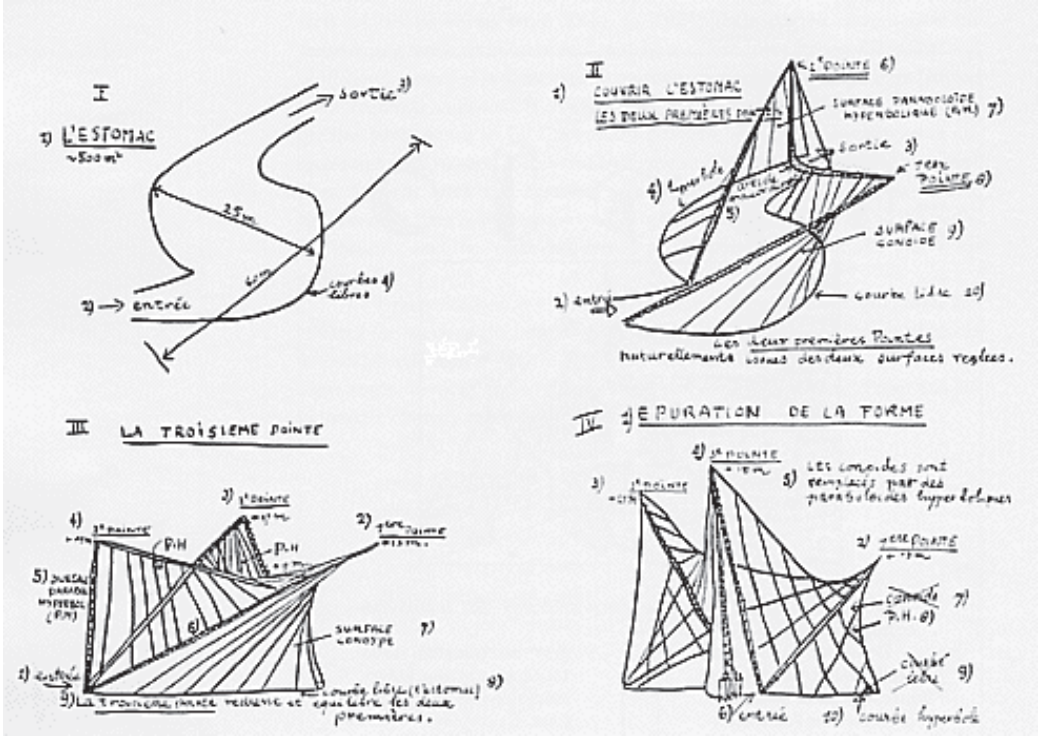
concept

The concept starts with the"stomach" floor plan. One enters, digests, and then exits. The inhabitants were subjected to a modern video created by Corbousier along with music called *"Poeme Electronique"* playing from 50 speakers inside the pavilion.

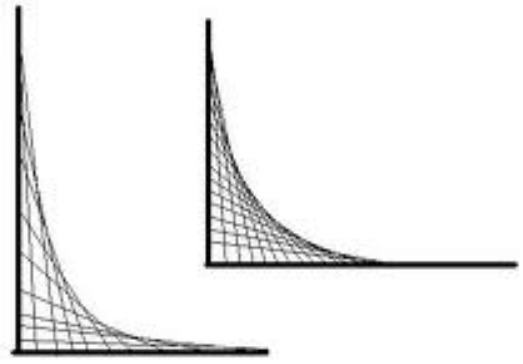
Metastasis, an orchestral work by Iannis Xenakis, became the concept for the overall aesthetic of the pavilion.

The preliminary sketch for the orchestral work, **"***Metastasis***"** was in graphic notation looking more like a blueprint than a musical score. It consisted of graphs of mass motion and glissandi like structural beams of the piece, with pitch on one axis and time on the other. In fact, this design ended up being the basis for the Phillips Pavilion.

Phillips Pavilion

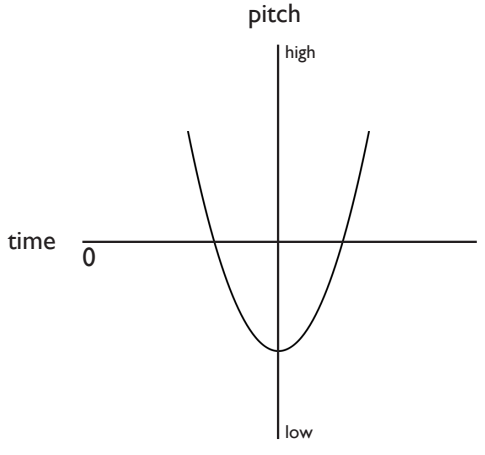


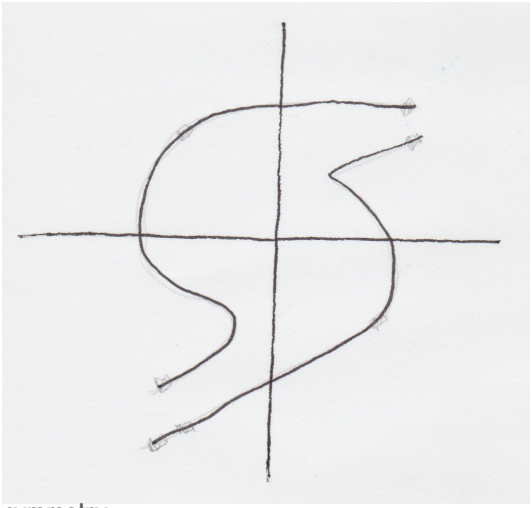
The time signature/rhythm is located at the base of the design and the increments for each section are all spaced evenly. the angle and heights of the three points are all constituted by the pitch changes of the music.



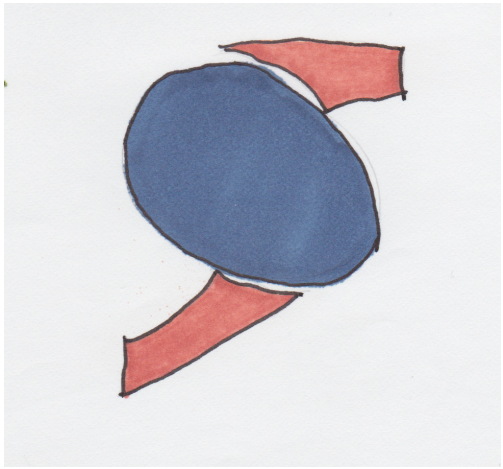
A parabola is the set of all points that are the same distance from a line

The Phillips Pavilion is a cluster of nine hyperbolic paraboloids, composed asymmetrically to create dynamically-angled contours



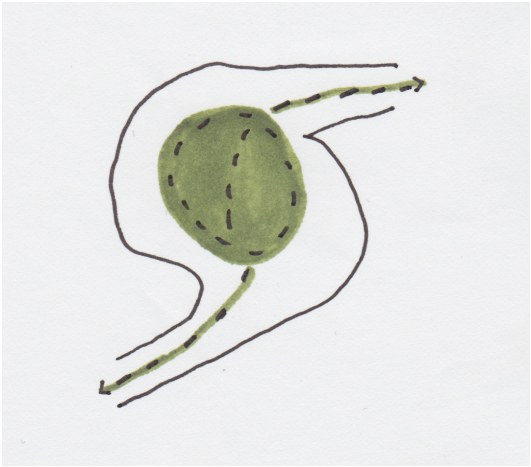


symmetry



parti

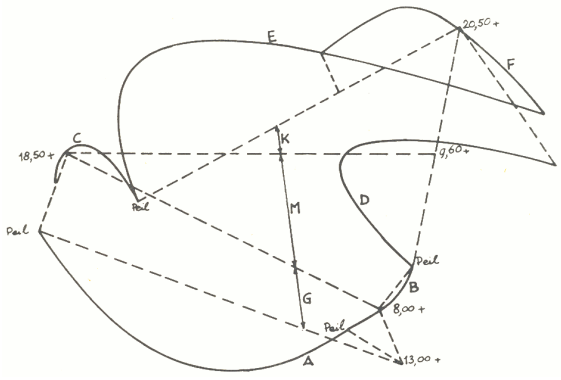
structure

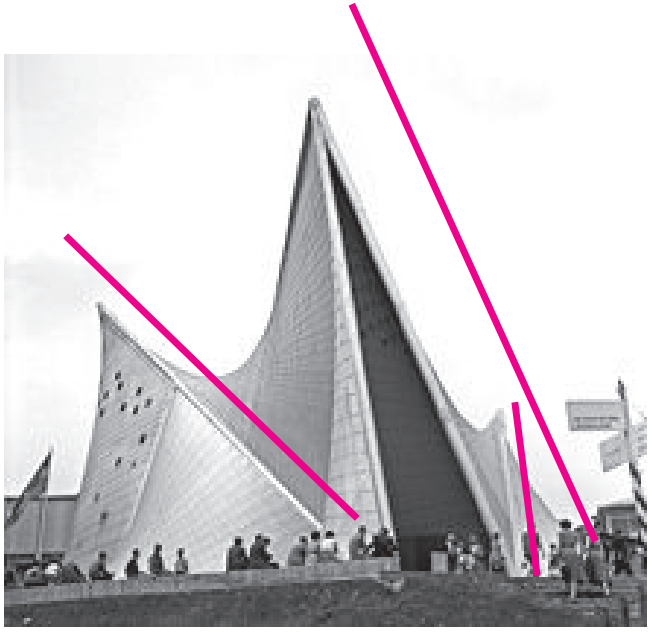


circulation

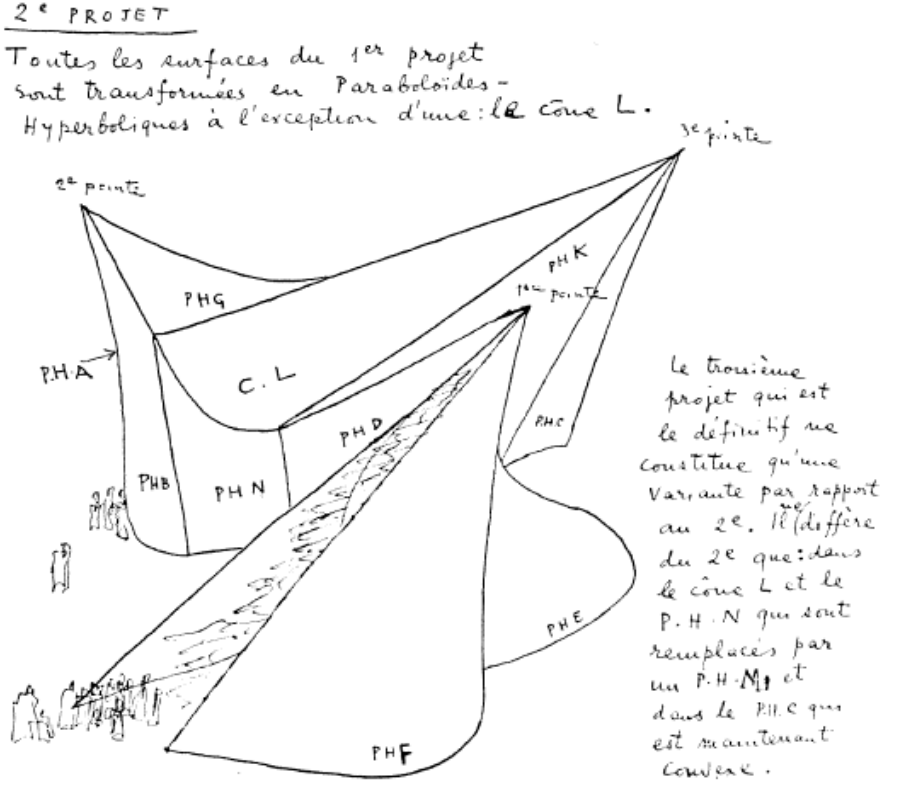
massing

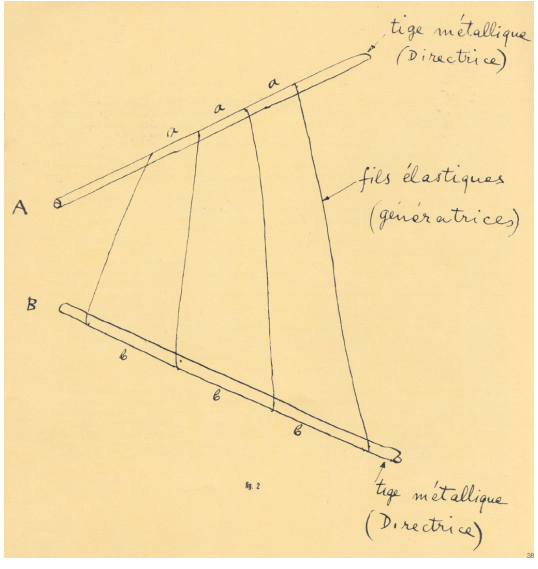
Phillips Pavilion





The Phillips Pavilion blurred the distinction between walls and ceiling, as well as space and time to showcase Phillips brand as being far superior to other electronic brands of the time




tige métallique
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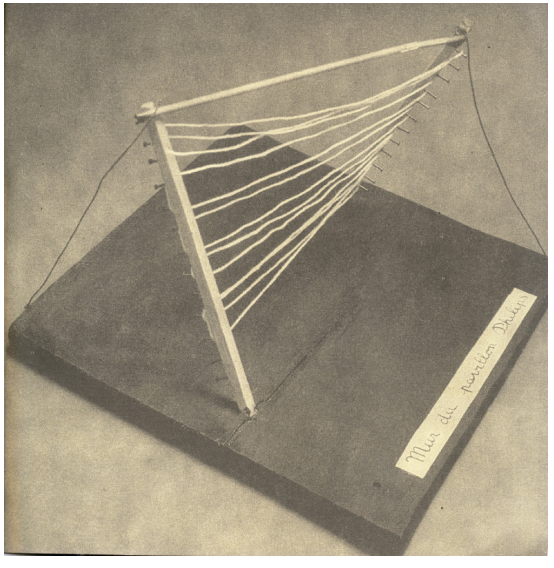
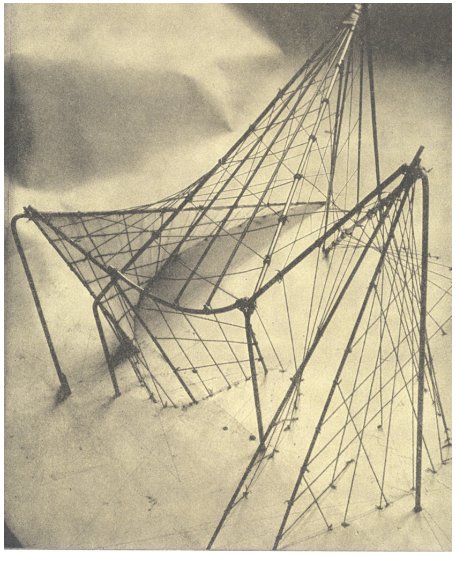
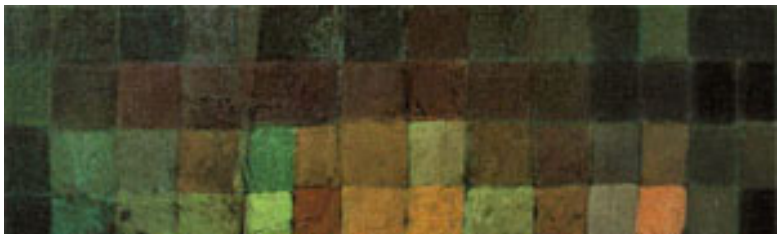

Mur du pavillon français



Paul Klee

1879 - 1940

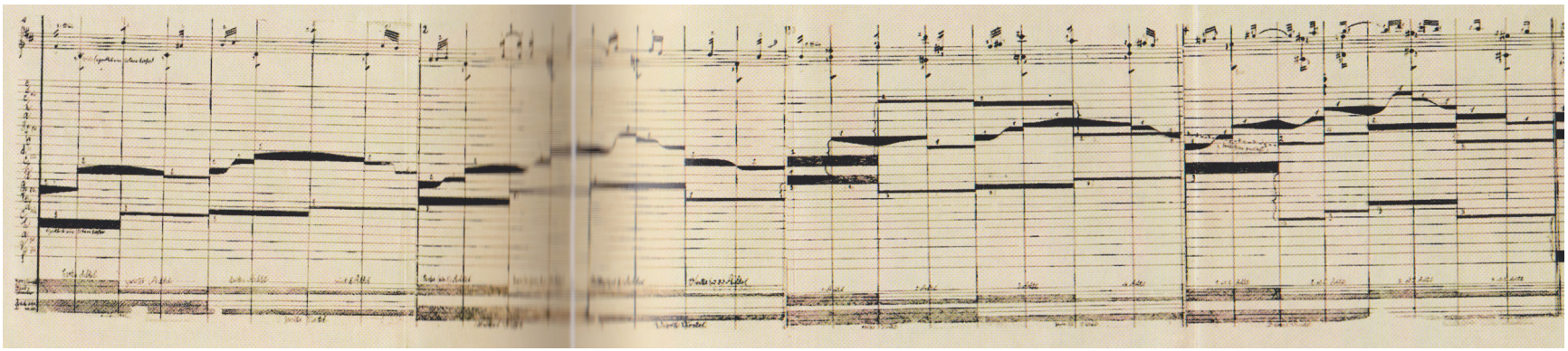


Paul Klee's theory of form begins with an analysis of the line. The line, as Klee sees it, derives from the movement of a point in space. There are "active, medial, and passive lines" as well as the positive and planar elements resulting from them. Intertwining lines are able to produce the most varied forms of expression ranging from tranquillity to turbulence.

Several parallel lines combine to form simple patterns which Klee termed "structural rhythms". Klee used this rhythm as a bridge to begin studying temporal rhythms of music to break them down and visually represent music. Klee mapped out a graphical system for registering the pitch of notes over three octaves. underneath this system, Klee mapped out the rhythmic groupings and dynamics as well as the measured rhythm.

From the rhythms Klee could explain the difference between "individual" and "structural" or what he termed "dividual" components of musical composition. This means that elements that are structural or dividual are part of a larger unit characterized by rhythmic repetition without variation and are able to be subdivided.

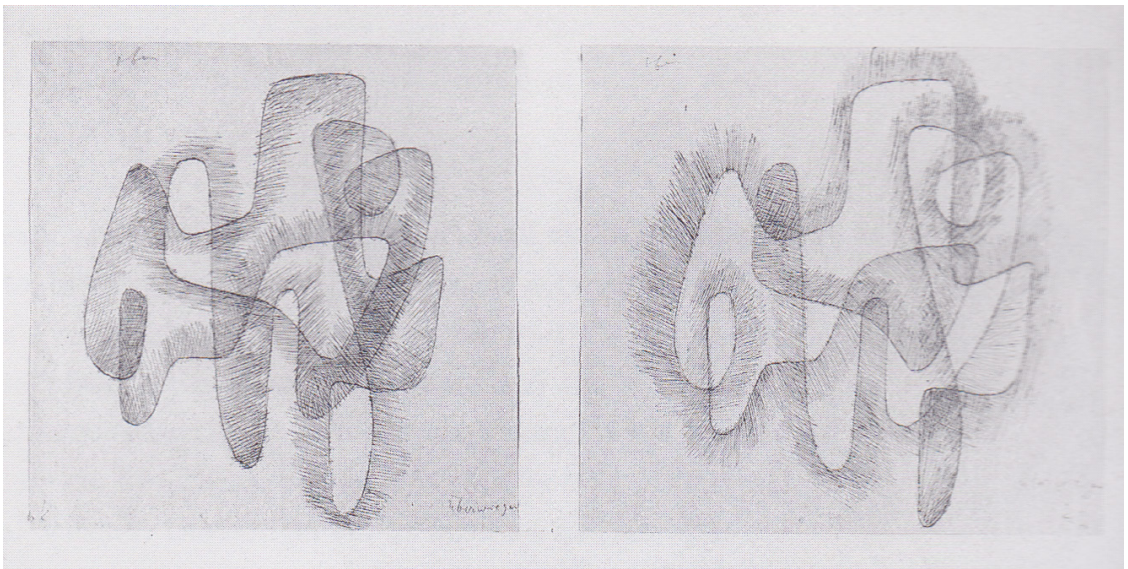
The individual components are defined as a rhythmically independent, irregular and non repeatable unit of composition which remains indivisible.



rhythmic groupings, dynamics as well as measured rhythm

a

b



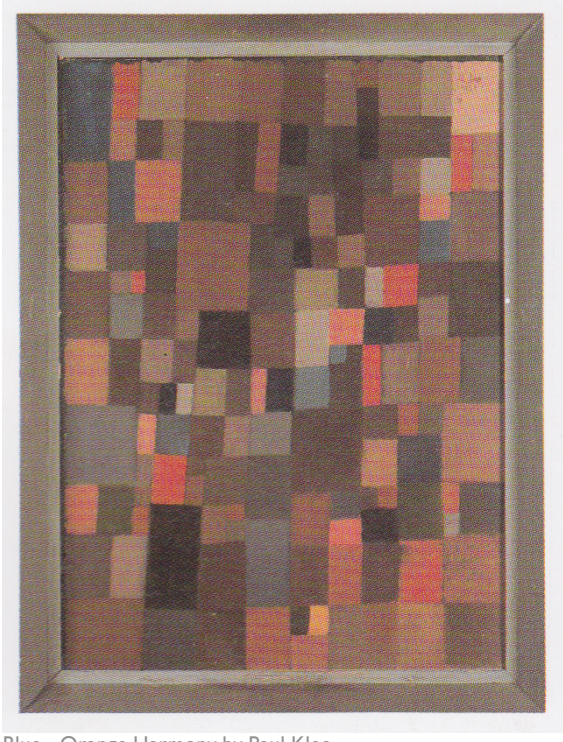
Polyphonic Painting

Klee defined overlapping colors of paint "polyphony". Polyphony describes music containing parts of equal significance which are played simultaneously.

Klee stated that simple movement is banal to us. The element of time is to be eliminated. Yesterday and today are working at the same time. Polyphonic painting is then defined by the layering of various structured areas produces a composition of many voices, a harmony of forms in which color takes on a specific meaning.

Examples, "A" and "B" demonstrate this definition. In one stroke Klee would draw a line that would cross its self several times to form loops or knots. The parts left blank with in the tangle of lines could then be filled with cross hatchings and shading to create something he termed "positively internal" or negatively external"

Paul Klee



Blue - Orange Harmony by Paul Klee

As Paul Klee developed his rhythmic style, color began to play an important role in his work. Klee examined relationships between specific colors in terms of their expressive content . By doing this, Klee discovered different forms of "movement" or changes that can occur:

Diametric motion between complementary colors beyond their mutual grey point,

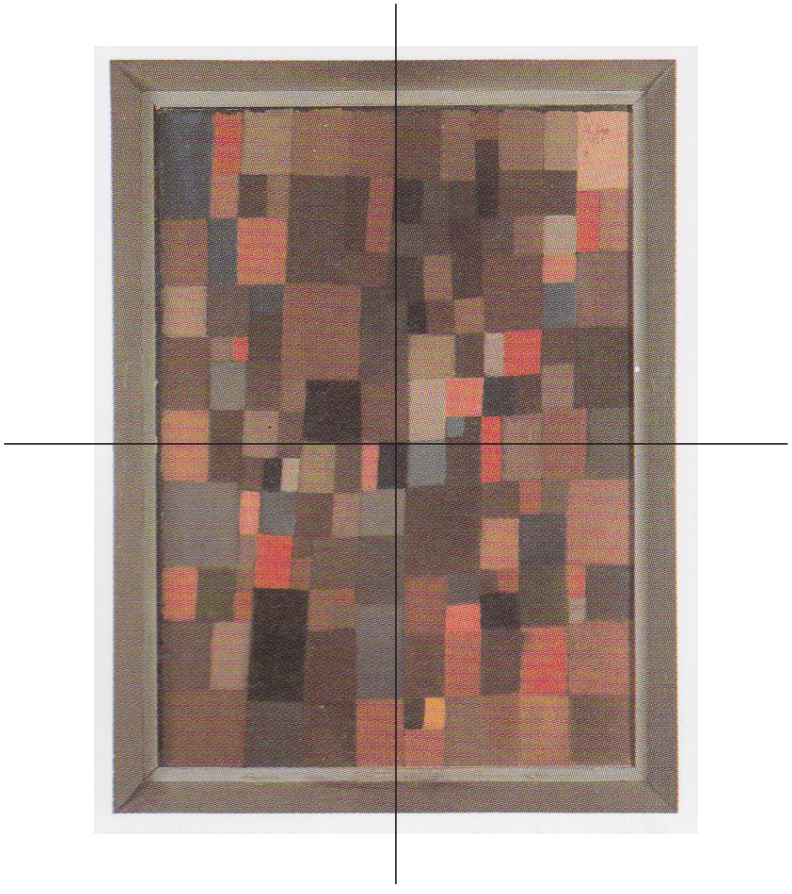
The peripheral motion on the color circle

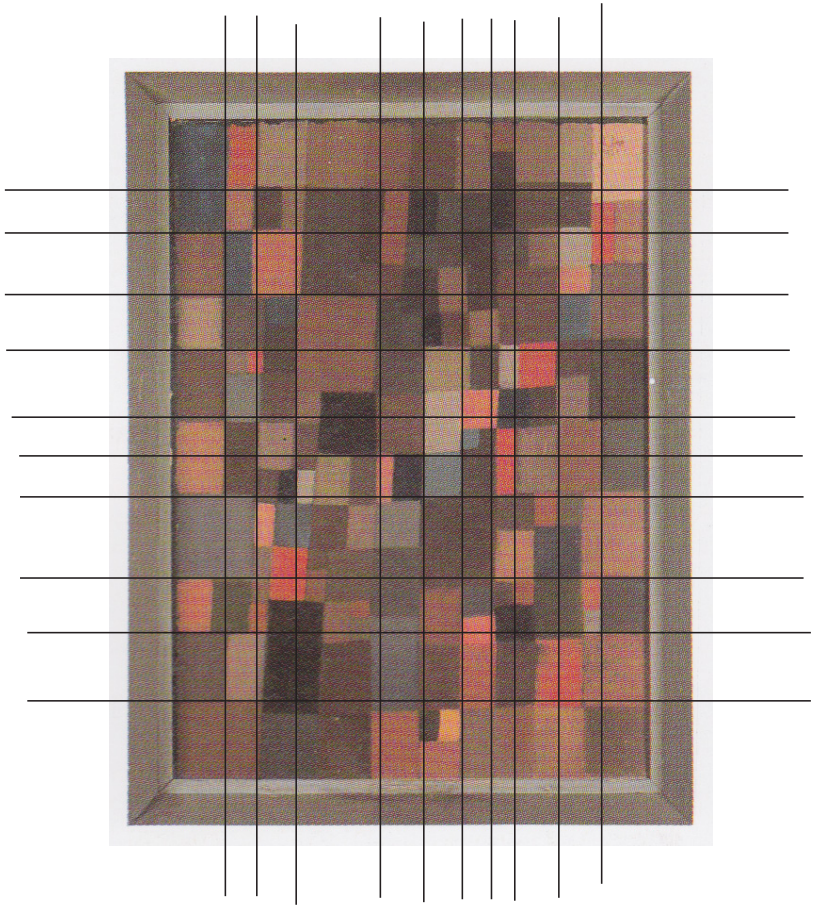
The intersections and component movements made between individual segments of the color circle.

Klees most important find was a theory he developed called "Canon of Totality". The "Canon of Totality" is the idea of color relationships which interprets the continuous circular motion between the primary and secondary colors as a vibrating, revolving organism.
The theory exemplifies the close relationship between color and music.

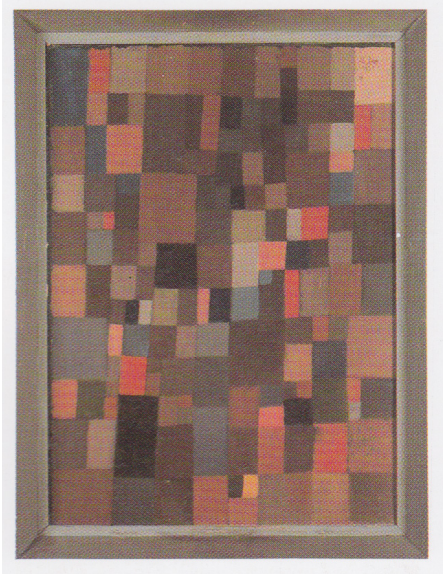
The example "Blue - Orange Harmony" embodies Klee's work as a whole. It suggests that there is rhythmic nuances with in the line - a simple line like the checkerboard that runs parallel to music while using color to help signify harmony within the rhythm and pitch from high to low notes.

This piece uses color combinations that create a harmonic balance in which no one color is dominating. By concentrating on individual accents and color sequences, the subtle relationships and arrangement of color are revealed in rows of rectangles which become lighter and darker or warmer and cooler. The different shades of color are combined like a musical chord into a harmonic whole in which the mood is communicated by the colors to that of a major or minor key.



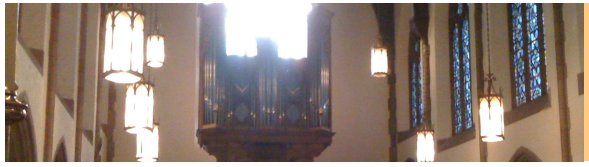


Paul Klee



site location

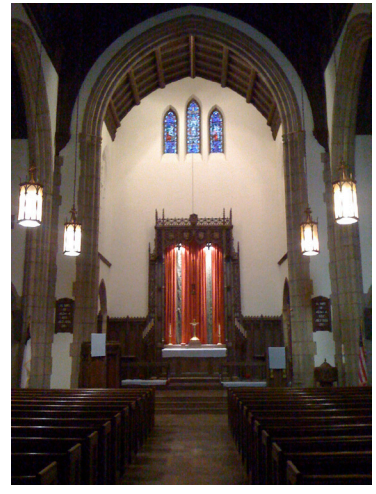
site study

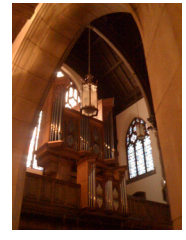


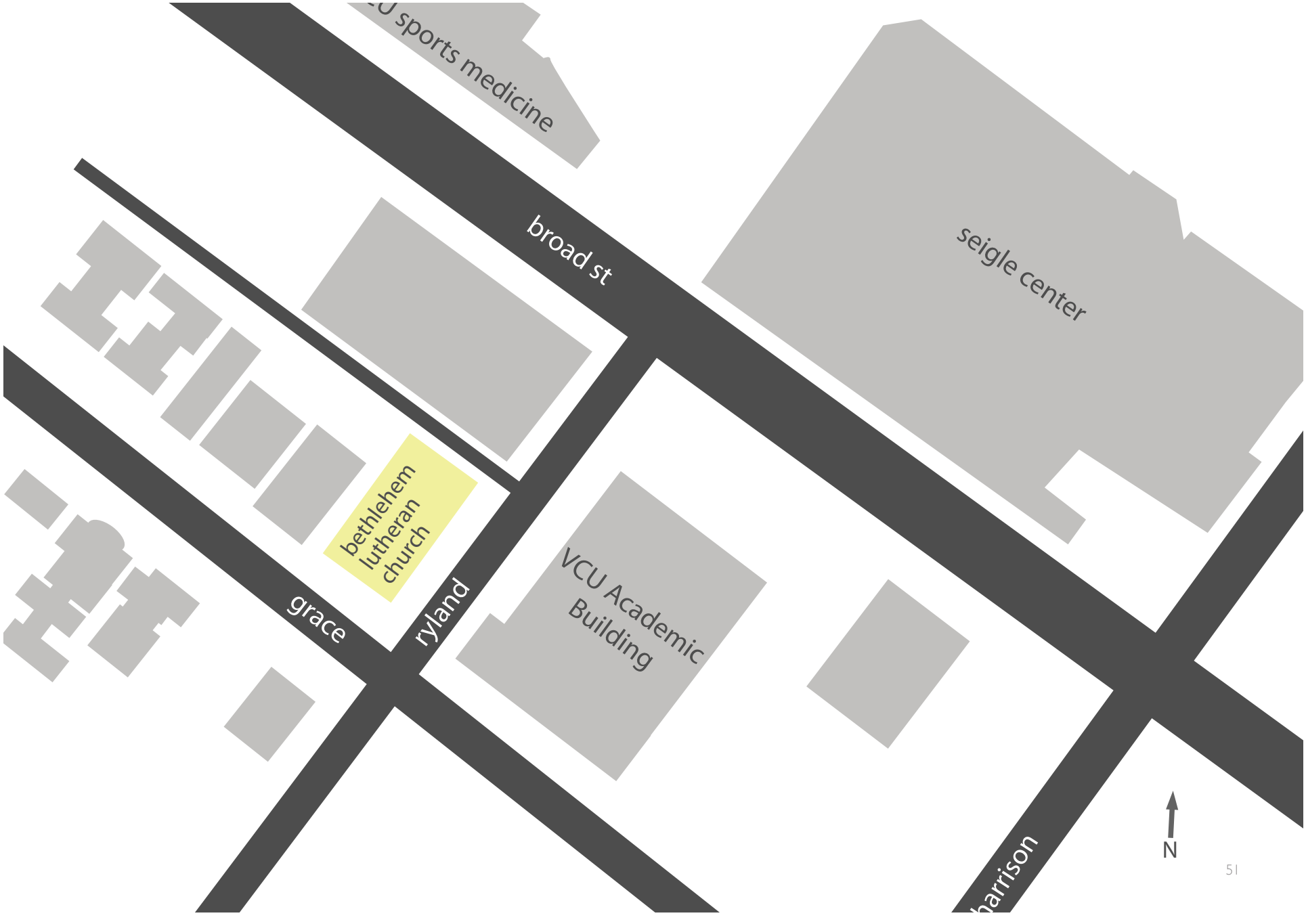
50-57

Bethlehem Lutheran Church

1100 West Grace Street Richmond, Virginia built between 1930 - 1931 by Wysong, Bengtson & Jones Architects






U sports medicine
broad st
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bethlehem lutheran church
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ryland
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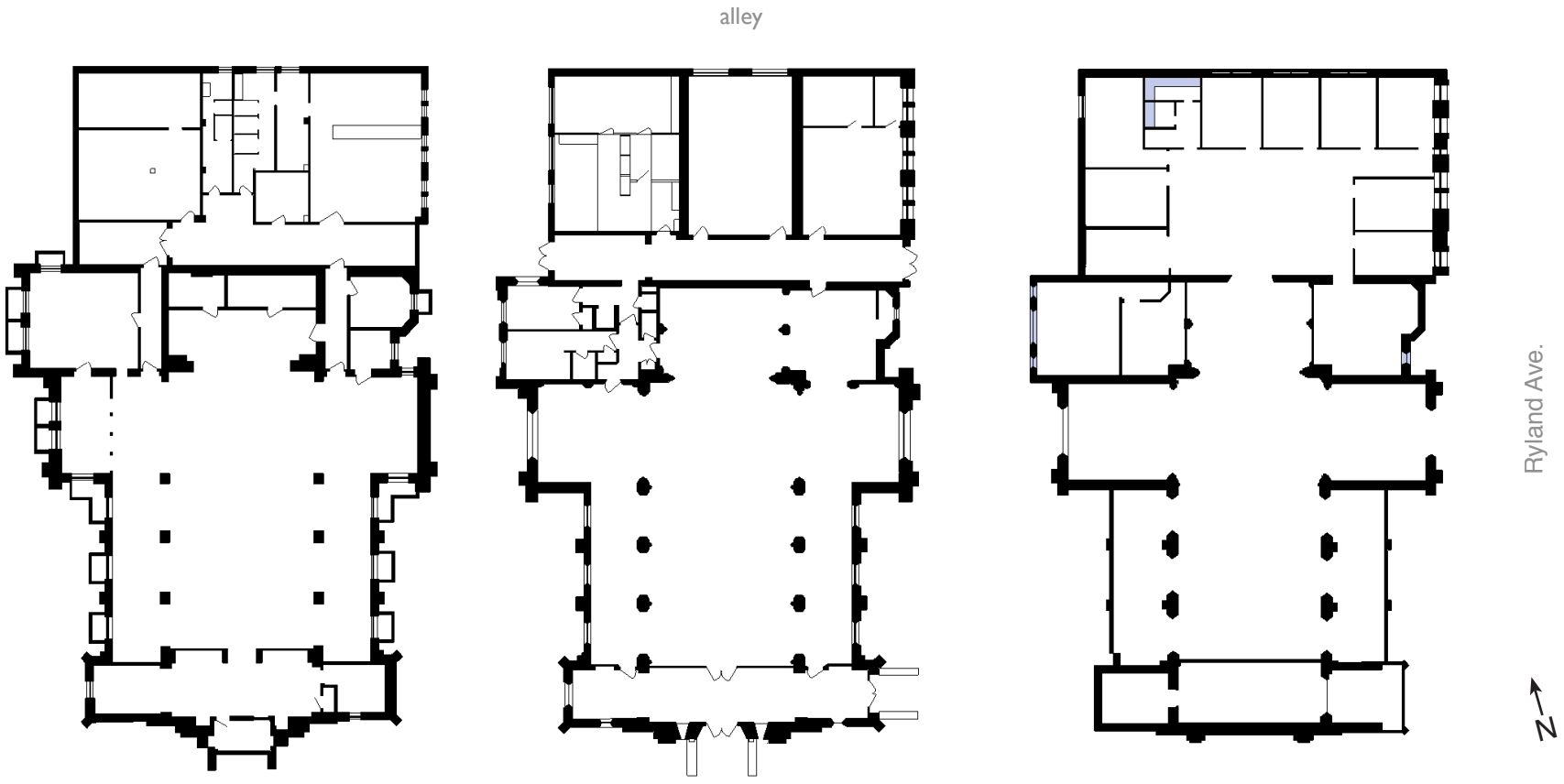
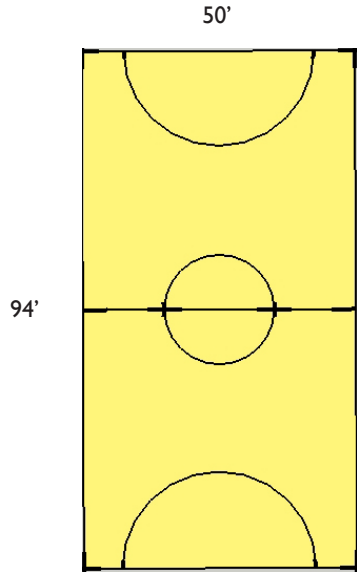
Bethlehem Lutheran Church



basement

first floor

second floor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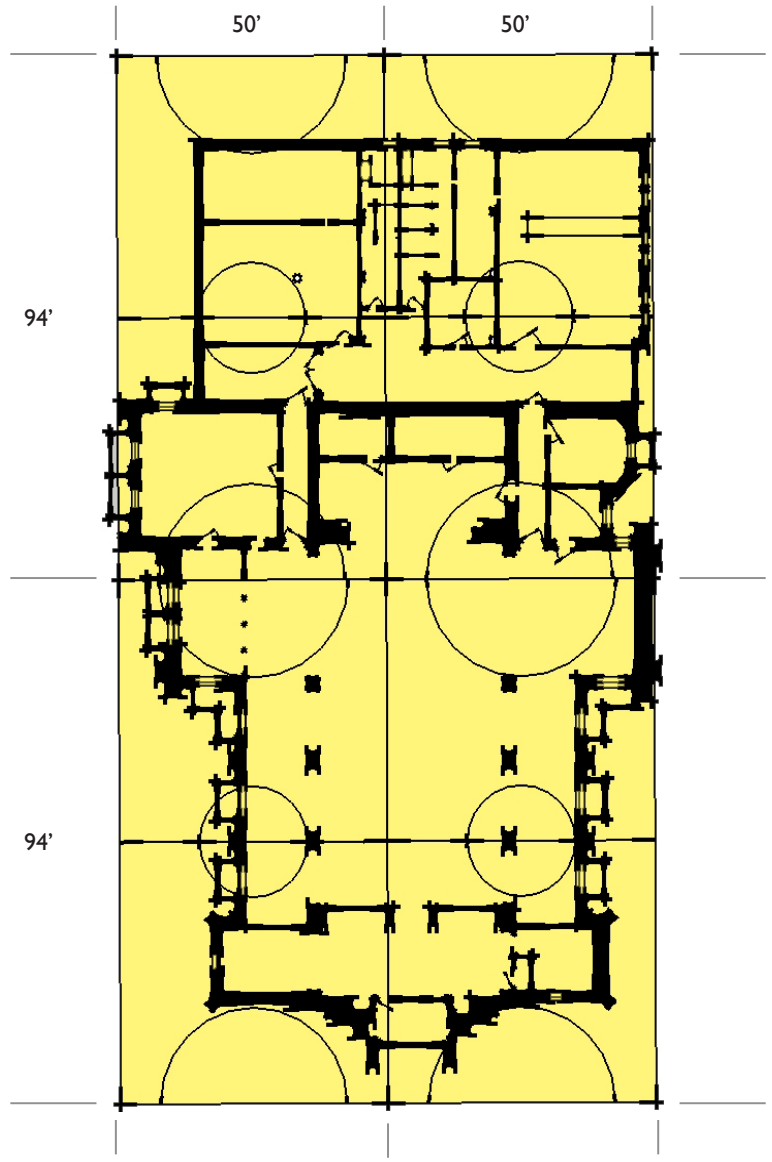
94’


50’
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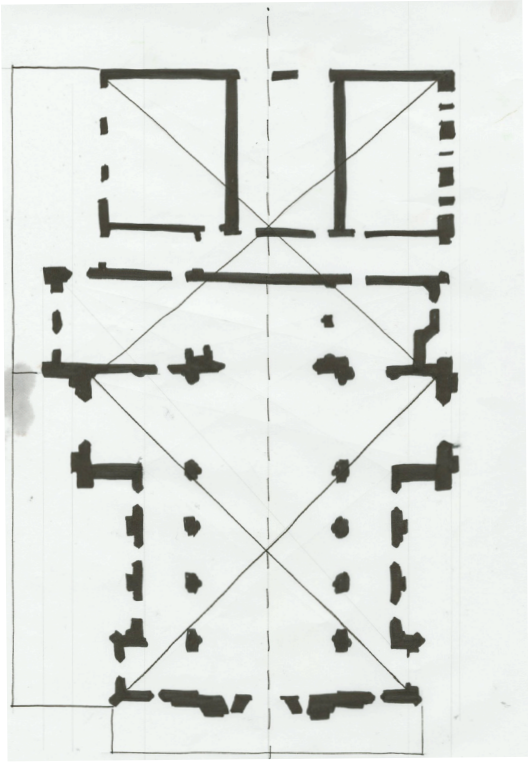
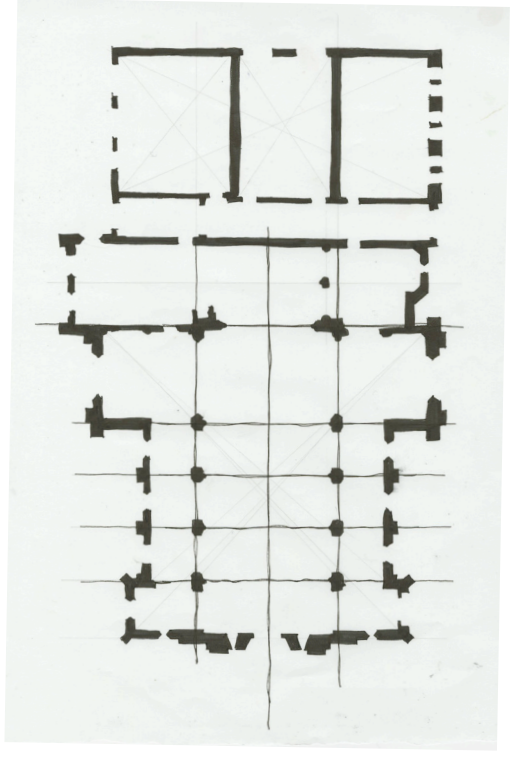
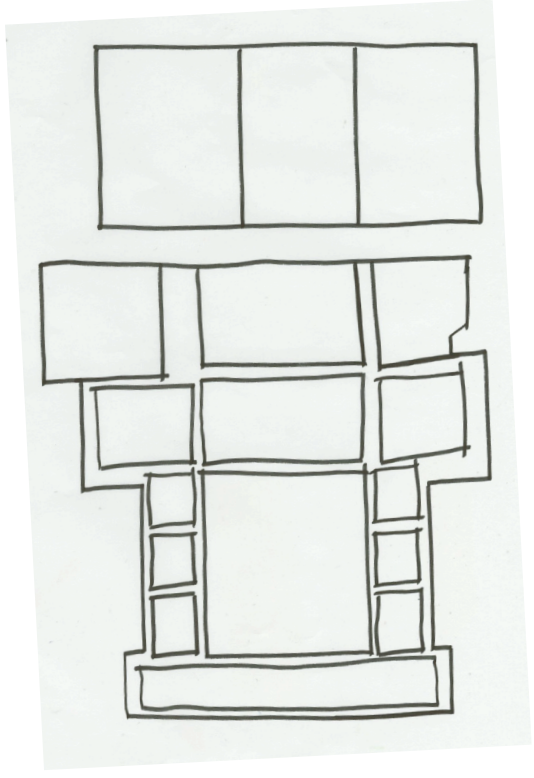
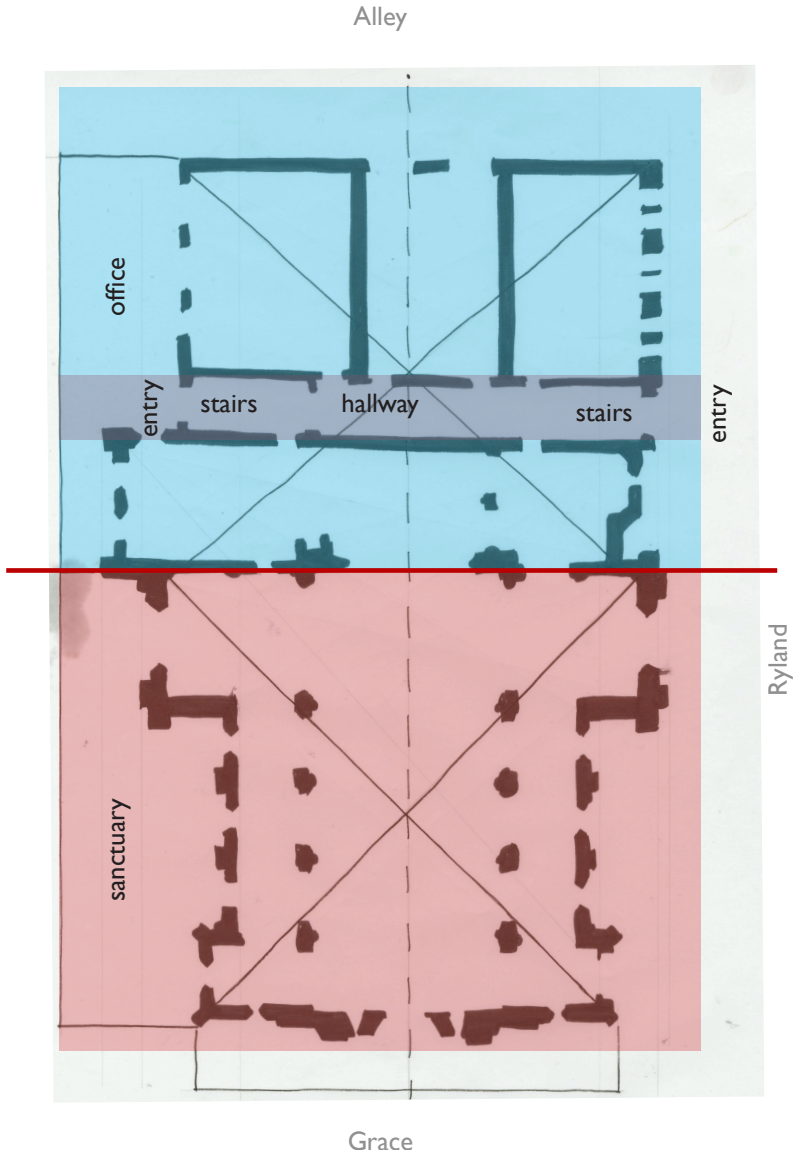
Bethlehem Lutheran Church







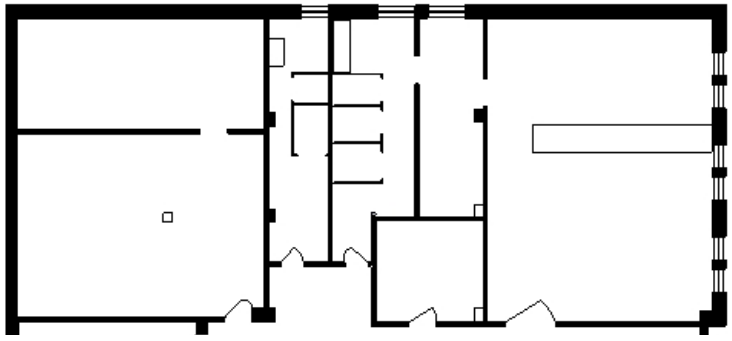


If split through the end of the narthax, the sanctuary and office are equal in size creating a system to understand the use of each side.

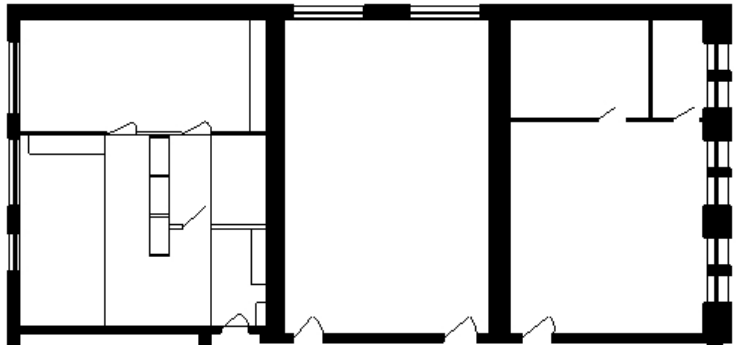
A portion of the sanctuary houses office space therefore it is necessary to include this space into the proportion to create equal sides.

The office side and sanctuary are part of one complete structure, however each side has a vastly different use that, when combined, work harmoniously together to operate as a church. What connects the two is the entry and exit hallway that extend from Ryland to the parallel side of the building.

Bethlehem Lutheran Church



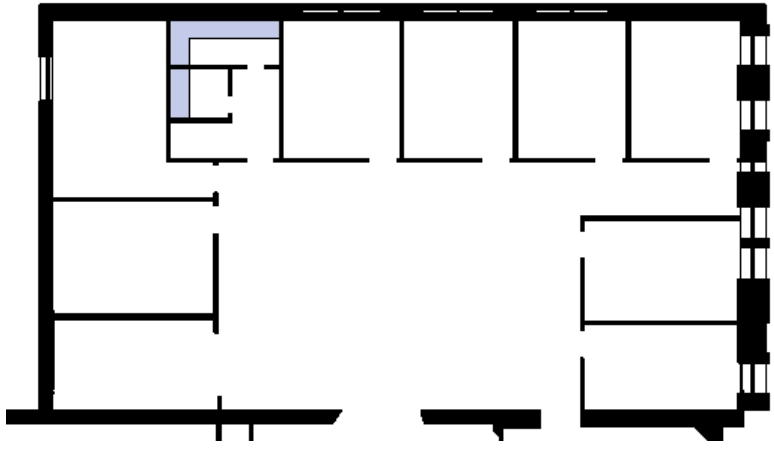
basement verse 1



first floor verse 2

The chorus of a song is the repeating portion of a song that is constant and tends to act as a reinforcement of what is being expressed in the verses of a song.

In a conversation with musician, Johnny Hunter, the verses of a song tell a story. There is no limit to the number of verses a song can have, however each one can have it's own meaning or purpose.



second floor verse 3

Standard Pop Song structure:

aba - bc b

a. Introduction/ verse - sets the mood and rhythm of the song. this gives the listener an immediate feeling through lyrics, melody, and harmony.

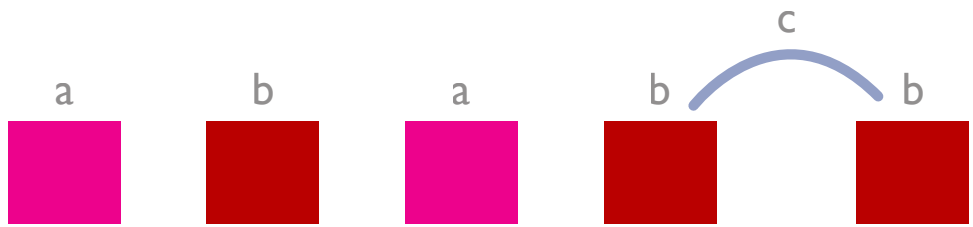
b. First chorus - new dynamic sound than the verse with a different melody or possible feeling that is introduced through harmonic and rhythmic means.

a. Second verse - the same arrangement as the beginning while replacing the lyrics.

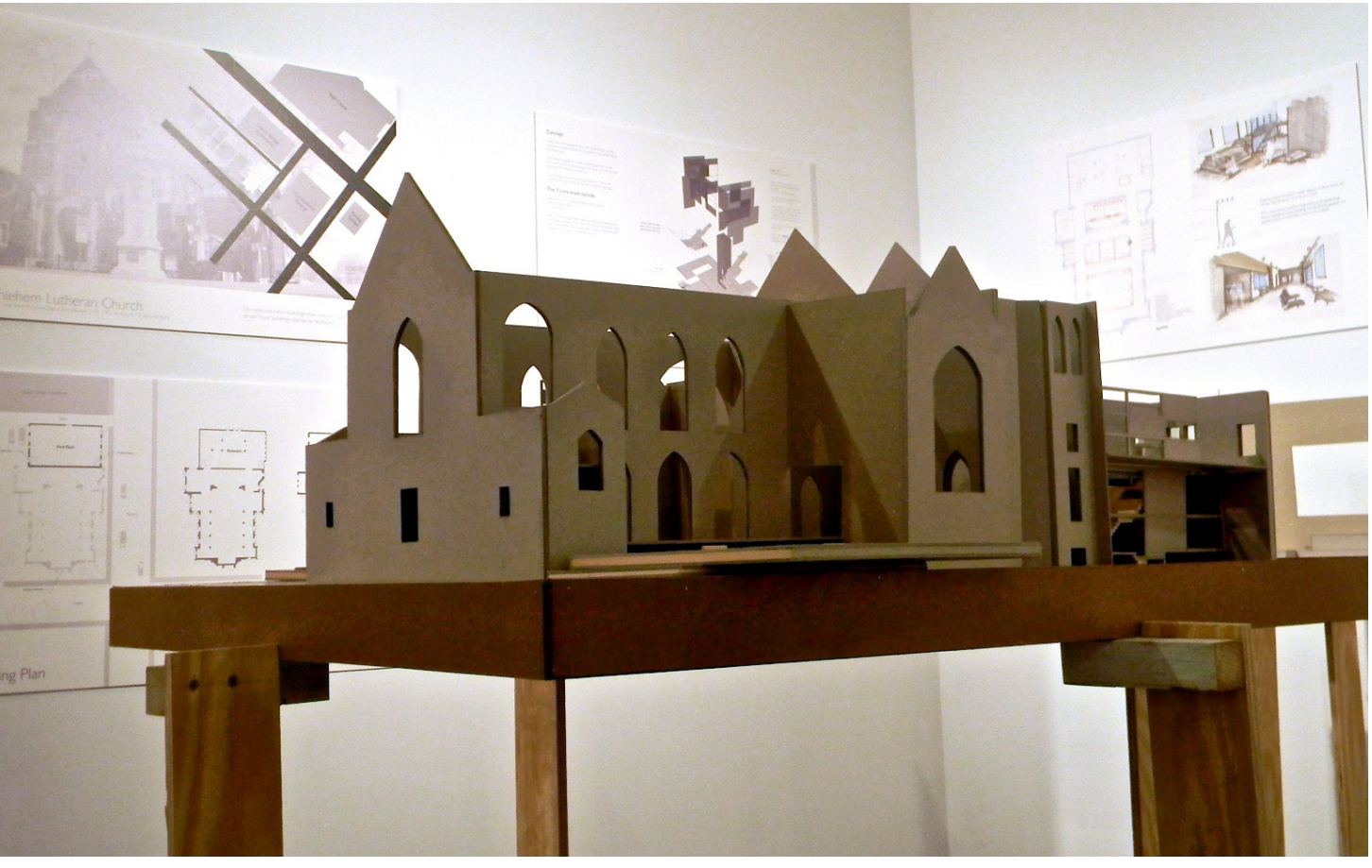
b. Second chorus - the same arrangement as the first

c. Bridge - the bridge usually differs from the verse and the chorus in its harmonic structure (chord progression) and lyrics - does not always contain lyrics.

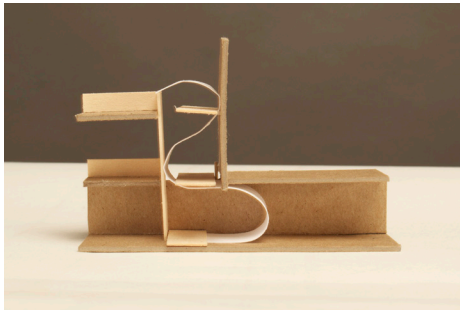
b. Third chorus/outro - the same arrangement as the first and second and is either resolved on the first chord or played out to the last chord in the structure.



Design Solution



Design Driver 1- Melody



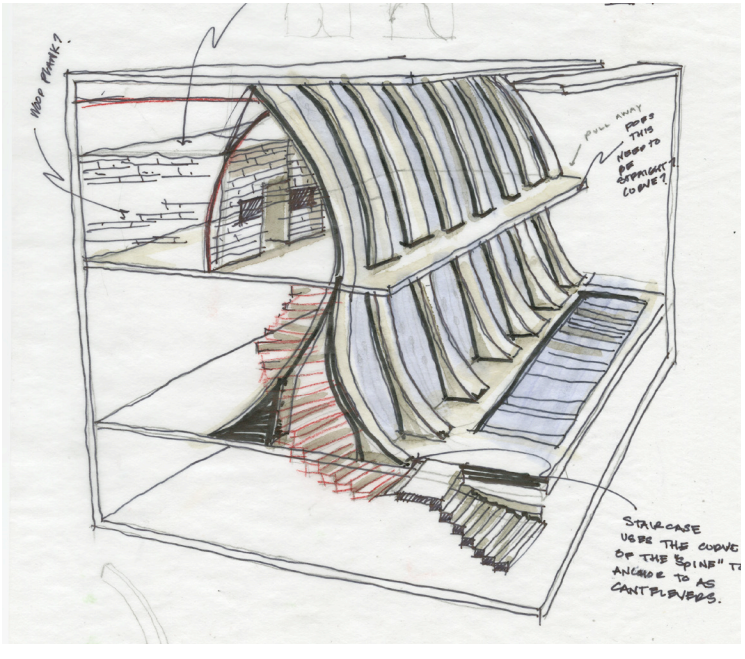
This concept model was created when rules and parameters to build by were taken out of the equation. This concept model was built the same way I play music. I play by ear, so it made sense to throw the rules out and not build with rules.

This model depicts the church with a "melody" flowing through it which helped to lead to several important sketches.

The sketch below is the first attempt at imposing concept #1 in the rear office space of the church. This is a direct interpretation of the sketch model to the left.

This sketch depicts a flowing mullion systems that penetrates the floors and connects them while holding glass that partitions specific rooms.

The mullion system is arbitrary and the scale is to large for the space. This drawing is significant because it is the first time a stair case is introduced to the idea.



Design Solution

Rear Office Concept and Circulation

There is a core message or story that is delivered in a song. The core message is delivered in a melody that is entertaining and interesting.

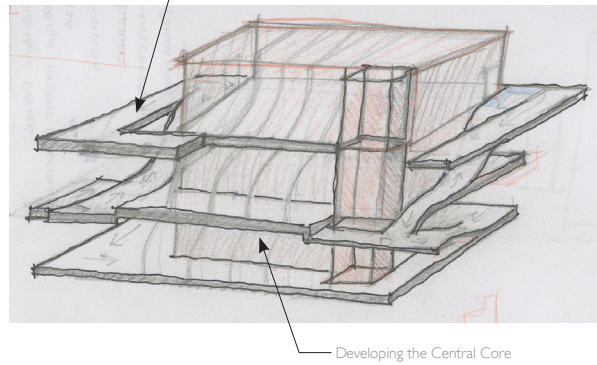
The message of a song is broken apart into verses. Each verse relates to the message but has it's own theme that reinforces the meaning of the song.

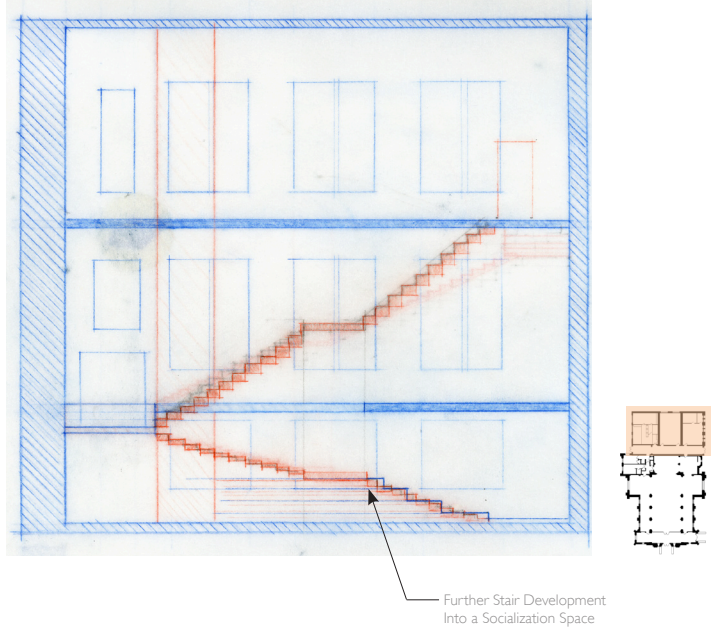
The message of this space is, "teaching music". There are 3 levels in this space that all operate to facilitate learning.

The 3 core levels include:

Basement Level - student lounge, practice spaces
First Floor - Administration Level
Second Floor - Faculty Offices

Like a verse, each of these spaces operate differently, but relate and reinforce the message of the space. The flow of the stairs is what keeps the students, faculty, and administrators interested and engaged in the space to continue learning.





Design Driver 2 - Individual + Group

Songs are made up of individual building blocks called notes. Notes can exist on their own or work together to create a musical chord. The idea of "individual" and "group" existing together became a driving force behind decisions relating to how people relate to one another in the space.

This concept model was designed around the idea of the interaction of notes. Notes working together create interesting sounds. This model was created by 4 different size pieces of basswood all representing an individual musical note. The larger piece of basswood is a whole note, the next size down, a half note, next a quarter note, and finally an eighth note.

This model is trying to explore the relationships of notes and how they interact as a whole. This model was successful in showing notes as a physical unit that could work in a built environment.

Design Driver 3 - practice spaces

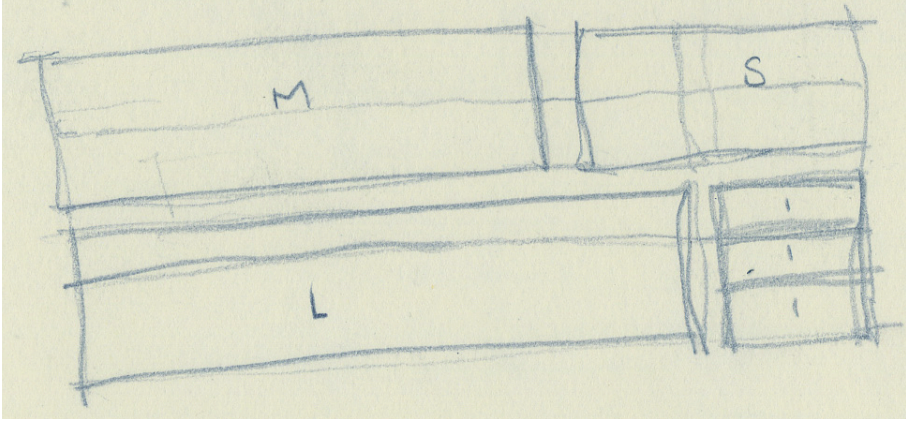
Working with clay in this concept model allowed me to work with a material that functions the same way as music. It is easily shaped and manipulated.

This model was an exploration of space opportunities for the practice spaces located in the basement of the church.

By shaping the clay roughly into the rectangular shape of the basement, I and then cut it into quarters on an off centered axis. By off centering the axis I was given four different sized cubes:

Individual, Small, Medium, Large

These sizes allowed me to view the practice spaces in a different way. I was given the opportunity to identify the needs of the program and impose the needs in the given space allotted.



practice space concept

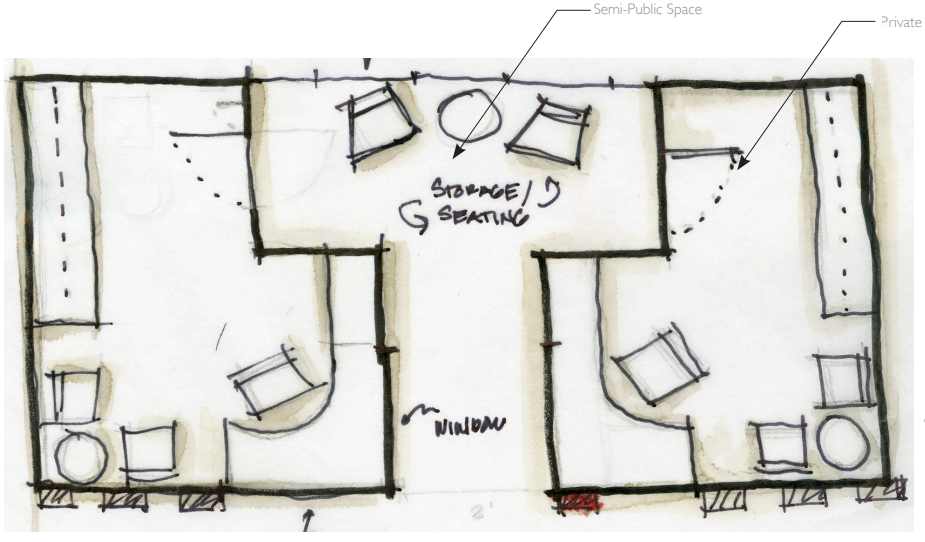
Design Solution

Design Driver 4 - faculty offices

Like design driver #3, working with clay allowed me to work with a material that functions in the same manner as music.

I wanted to explore space again in this model, and how one object can function separately and together. By shaping the clay into a cube and then halving it with a "Z" cut The separate shapes offer the opportunity to position the halves in a way that potentially functions as space.

Positioning the cubes as shown below allows the opportunity to have public space, private space, and semi-private space.



Design Driver 5 - window system
Chord Structure - Guitar

The order shown here is based on the chord structure of a guitar. A guitar neck consists of frets and strings. To play a chord (3 or more musical notes played together) one must press on a string at the correct fret.

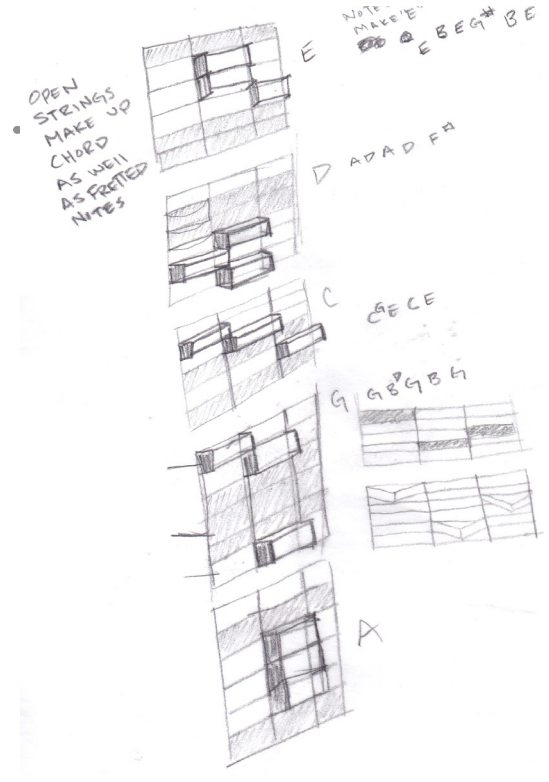
These drawings and subsequent models depict the tri-tone major chords: E, D, C, G and A, all located on the first 3 frets. The frets and crossing strings create a grid that creates the order for this model.

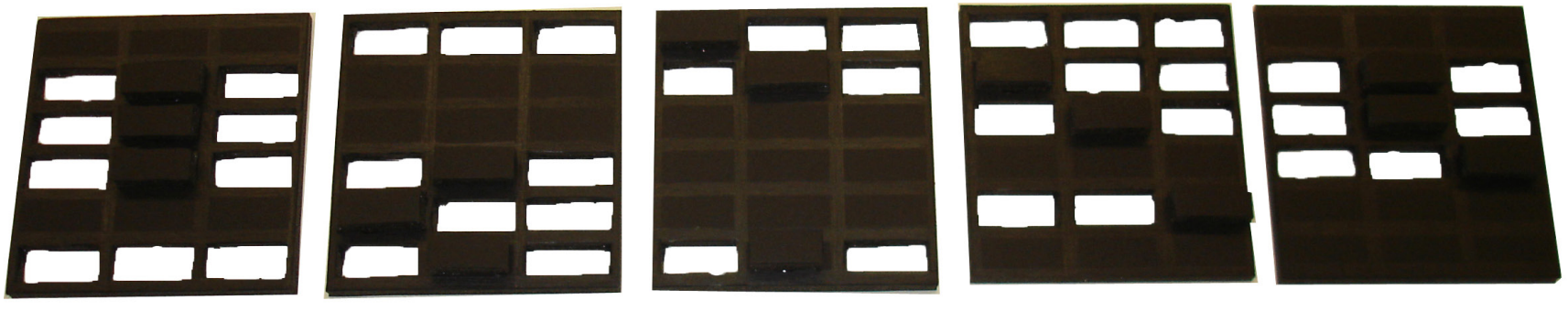
Certain chords have open strings that can be played along with the notes that have to be pressed to create a chord.

Other notes cannot be played or the chord structure will not be correct.

This creates the following rules for this design driver:

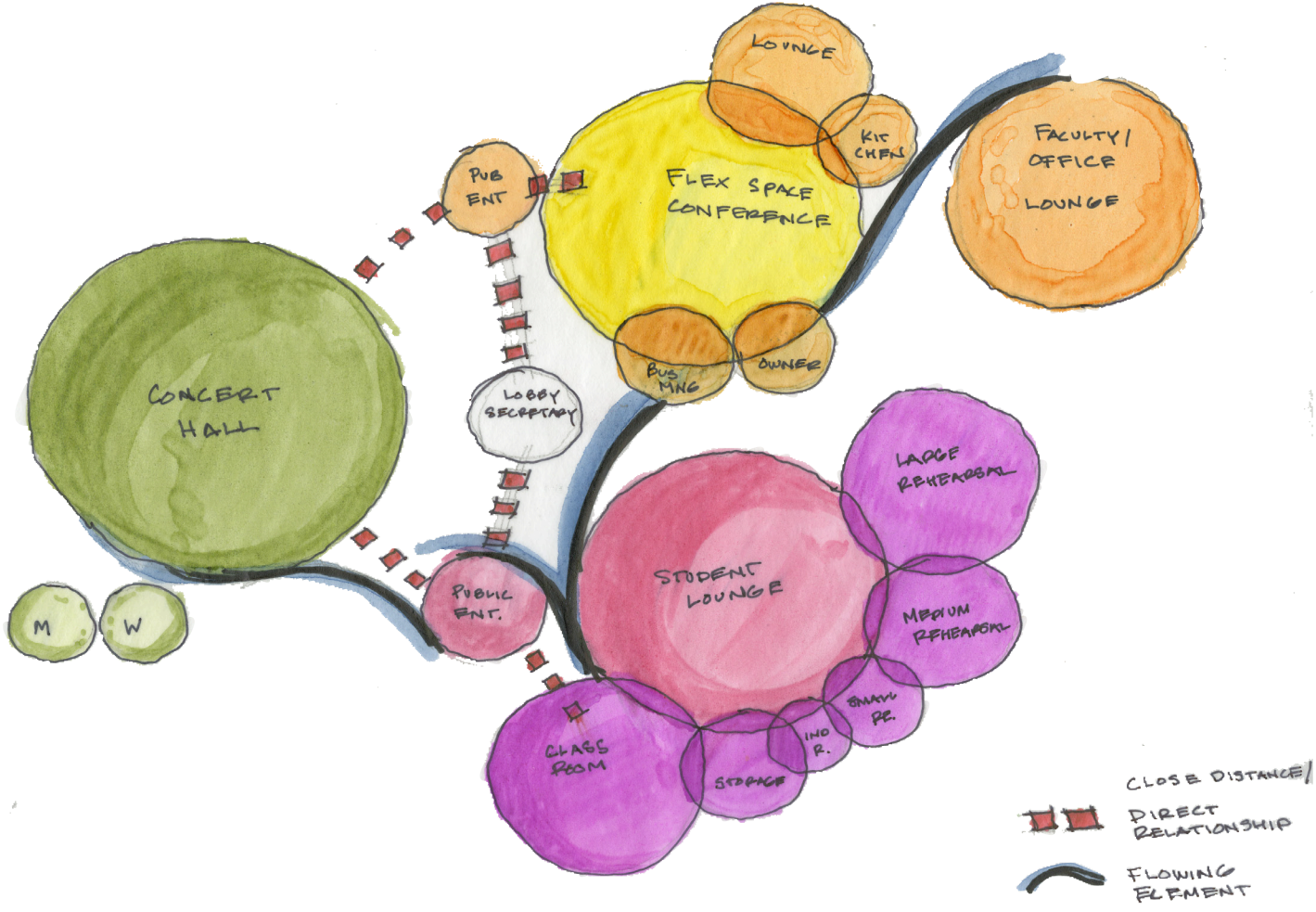
Play - raised - ***Opaque***
Don't Play - cut out - ***Transparent***
Maybe Play - flat/not cut out - ***Translucent***





Design Solution

Bubble Diagramming



Adjacency Matrix

H - High
M - Medium
L - Low
Y - Yes
N - No
Red - immediate adjacency

	SF Needed	Adjacencies	Public Access	Daylight	Privacy	Plumbing	Equipment
1. *Main Concert Hall Entrance Lobby*	200 SF	2	H	I	N	N	
2. *Concert Hall*		1	*H*	*Y*	*N*	*N*	*Sound System, Sound board, Acoustics, Seating for*
3. *Public Entrance Lobby*	750 SF	2 5 6 7 8 10 16 17	H	Y	N	N	
4. *Private Entrance*	150 SF	13 15 17 18 19	L	Y	Y	N	
5. *Large Rehearsal Space*	1,500 SF	6 7 8 10	M	Y	Y	N	Piano, Seating for 30, Shelving, and Coat Storage
6. *Medium Rehearsal Space*	750 SF	5 7 8 10	M	Y	Y	N	Piano, Seating for 15, Shelving, and Coat Storage
7. *Small Rehearsal Space*	250 SF	5 6 8 10	M	Y	Y	N	Piano, Seating for 5, Shelving, and Coat Storage
8. *Individual Rehearsal Space*	150 SF	2 4 5 6 8 23	M	I	Y	N	Seat, Shelf, and Coat Storage
9. *Classroom/Technology Lab*	500 SF	2 4 5 6 23	M	Y	Y	N	Piano / AV Equipment / Keyboards / Whiteboard, Storage
10. *Student Lounge*	1000 SF	4 5 6 7	M	N		N	
11. *Office manager office*	250 SF	12 14 15 18 4	L	Y	L	N	Desk, Chair, Shelving
12. *Owner Office*	400 SF	11 14 15 18 4	L	Y	Y	N	Desk, Chair, Shelving, Conference Table Seating for 8
13. *Faculty Offices x 6*	150 SF	4 19	L	I	L	N	Built-in Desk, Shelving, Desk Chair, Semi-Public Seating
14. *Faculty Lounge*	**600 SF**	**13 4 19**	**L**	**I**	**Y**	**N**	**Storage, Conference Table, Fridge, Microwave, Seating**
15. *Kitchenette*	400 SF	14 12 11 18	L	I	Y	Y	Sink, Cabinets, Refrigerator, Oven, Space for Seating
16. *Men's Bathroom*	SF	1 2 3	H	N	Y	Y	ADA compliant
17. *Women's Bathroom*	SF	1 2 3	H	N	Y	Y	ADA compliant
18. *Office Bathroom*	SF		L	N	Y	Y	ADA Compliant
19. *Private Tutor Space*	250 SF	13	L	Y	Y	N	Piano, Seating for 2, Desk and chair

Design Solution

Building Code Requirements

Office

Usage Group: E - 17,818'

Type of Construction: I-A

Occupancy Load: 356
(50 net shops vocational room areas)

Classroom: (20' net per person)
25 (500 sq. ft.)

Vocational Rooms: (50' net per person)

Individual Rehearsal Rooms:	1	(50 sq. ft.)
Small Rehearsal Rooms:	5	(250 sq. ft.)
Medium Rehearsal Rooms:	15	(750 sq. ft.)
Large Rehearsal Rooms:	30	(1,500 sq. ft.)

Student Lounge: 3,193'

Instrument Storage: 10 (300' per person)

Plumbing:
Male water closet: 7 (1 per 50)
Female: water closet: 7 (1 per 50)

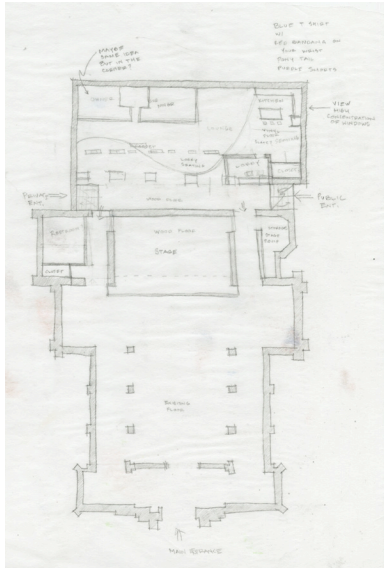
Lavatory: **3**

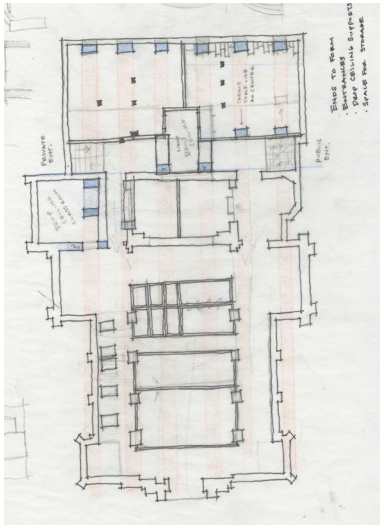
Drinking fountain: 3 (1 per 100)

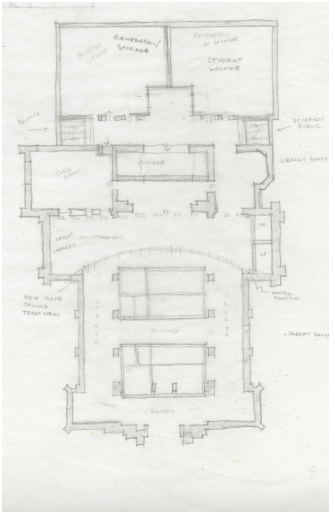
Egress:
Minimum 2 exits
Stairway Egress 356 x .3 - 106"

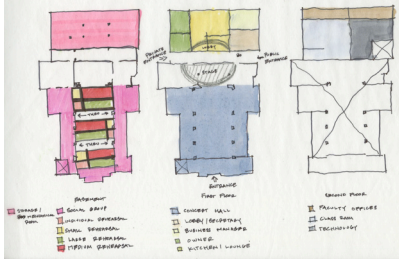
corridor fire resistance rating:
A and E (with greater than 30 occupant load)
1hr w/o sprinkler
.5hr with sprinklers

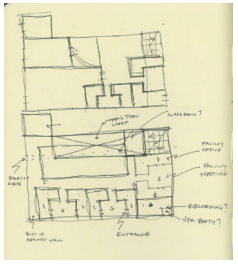
Space Planning

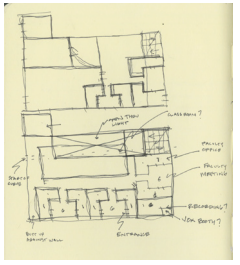


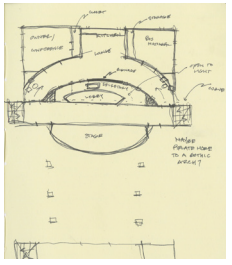




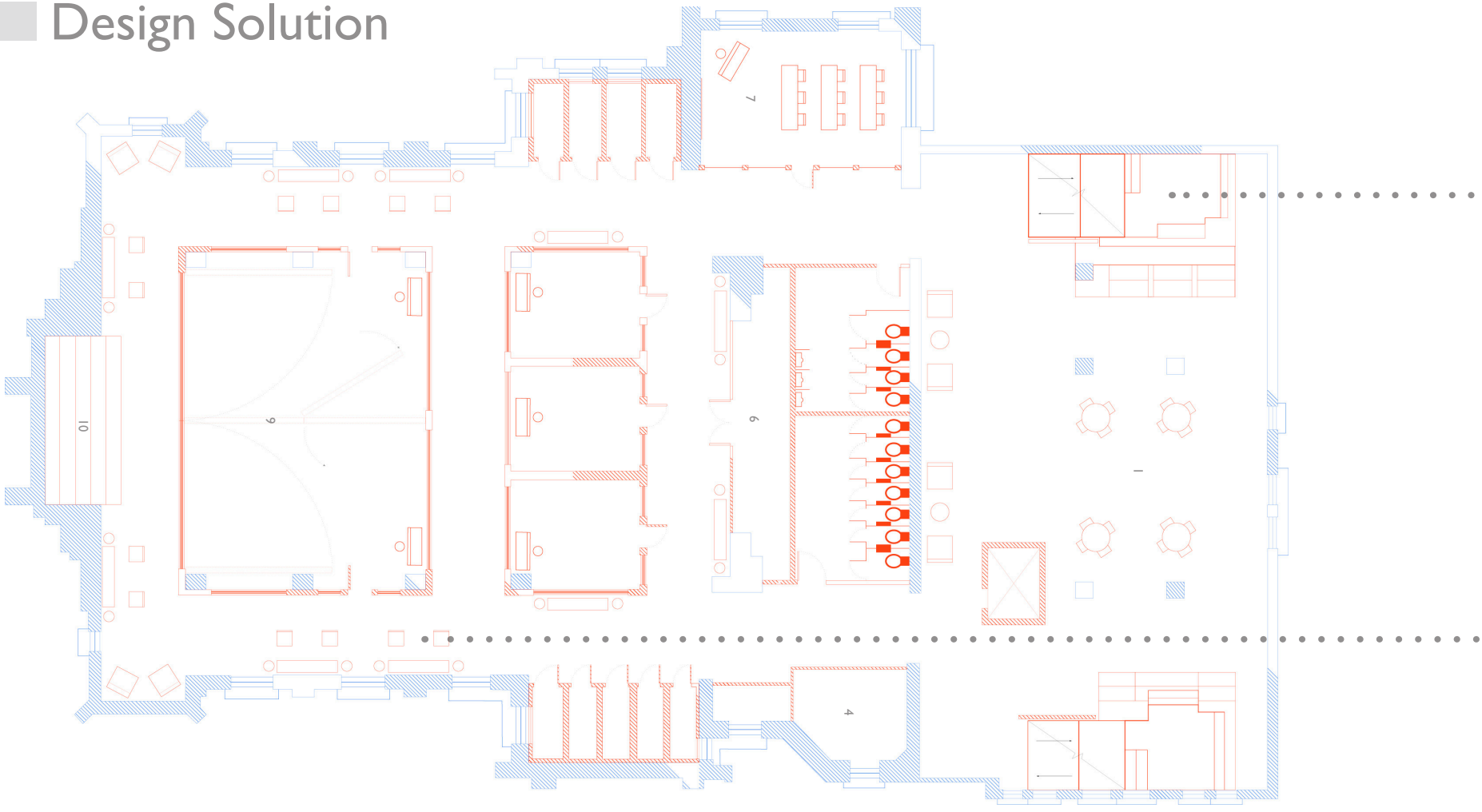






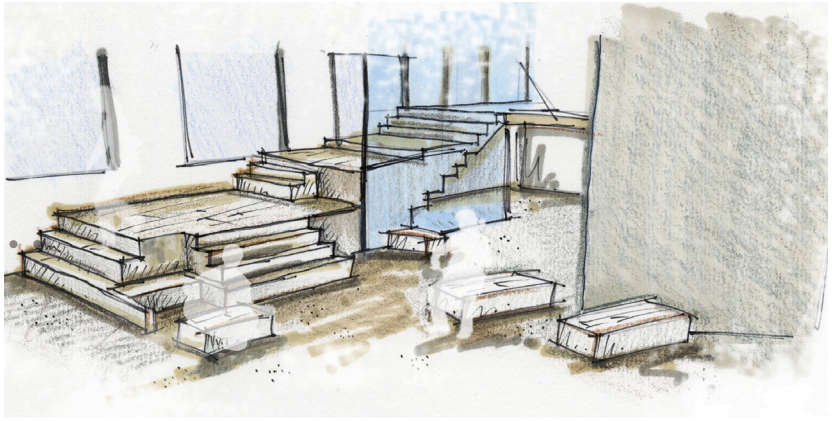


Design Solution



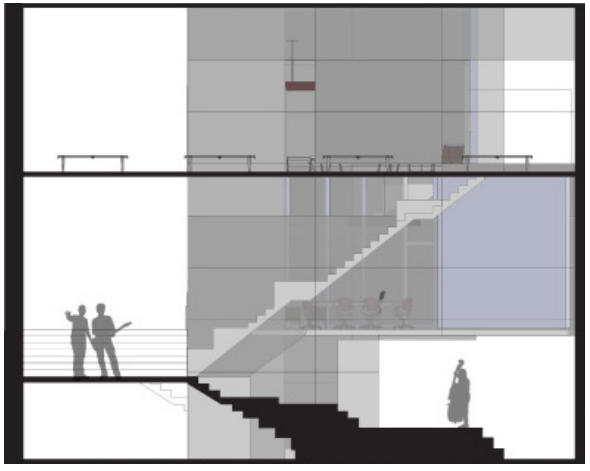
1 Student Lounge
2 Women's Lavatory
3 Men's Lavatory
4 Janitors Closet
5 Individual Practice Room
6 Instrument Storage
7 Classroom / with Piano
8 Small Practice Room / with Piano (5 People)
9 Medium Practice Room / with Piano(15 People)
Opens to Large Room (30 People)
10 Bleacher System

Basement Redesign



The concept of "melody" manifests itself in the staircase. The staircase is transformed into a space for socialization and learning. The stair risers were designed to be 10' long to allow space for people to congregate as well as traverse. There are built up spaces that work as seating.

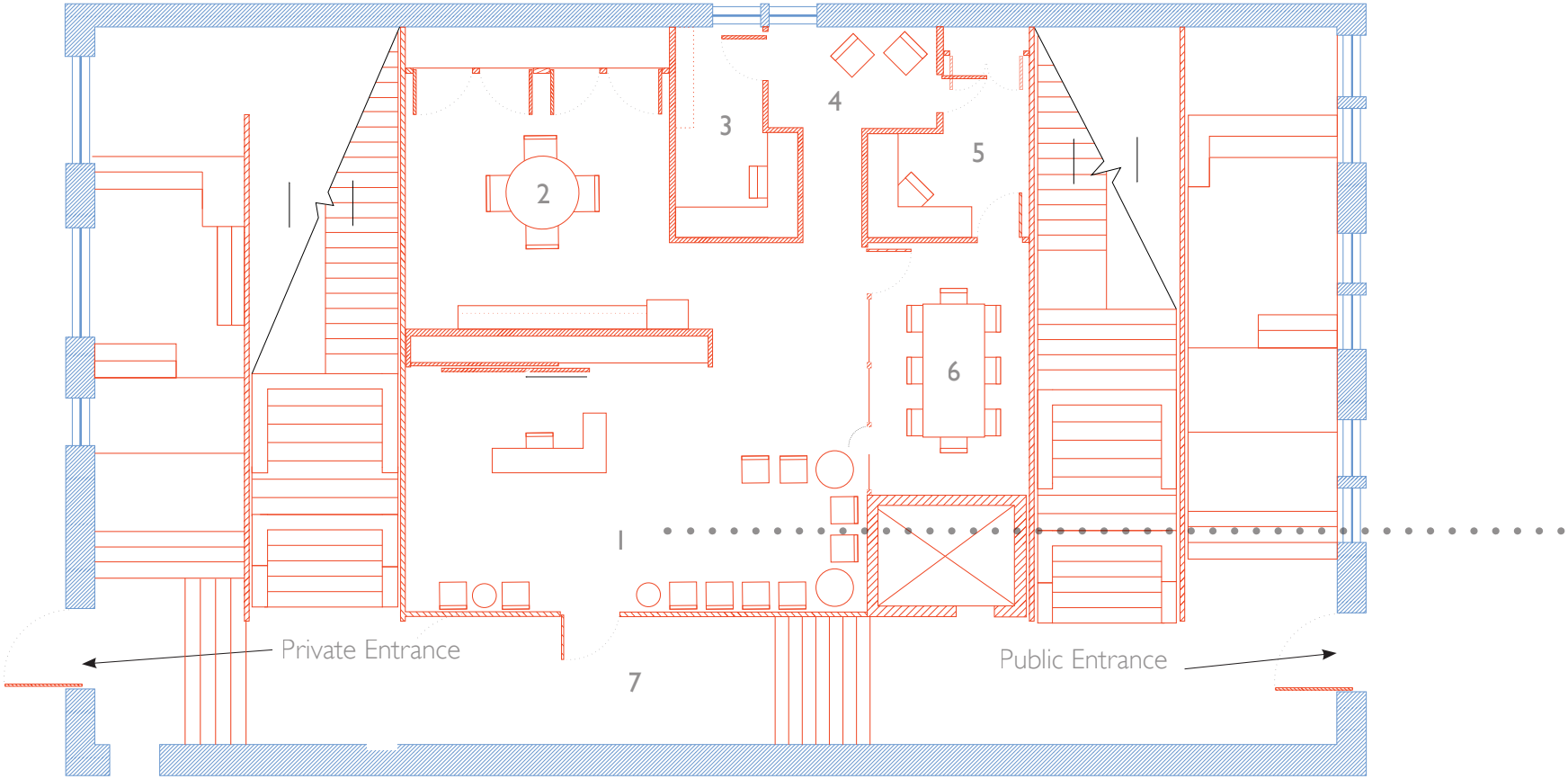
The staircase platform in the basement spreads out to allow for a more flexible congregation space. The final platform has multiple blocks that pull out allowing for movable seating and can create a stage when pieced together. This allows for a more impromptu environment.



While the staircase is an important element of the school, the practice spaces in the basement are also just as important. The design of these rooms allow for a transparent and sound proof experience for those on the outside to observe and learn. The use of glass also allows for a lighter feel in an other wise large imposing object in the basement.

The circulation of the space is important as well because it allows for easy access to both sides and it helps to integrate the idea of socialization seen on the staircase. The perimeter circulation is a nod to the sanctuary's ambulatory just above the basement. The ambulatory is seen in most Gothic architecture.

Design Solution



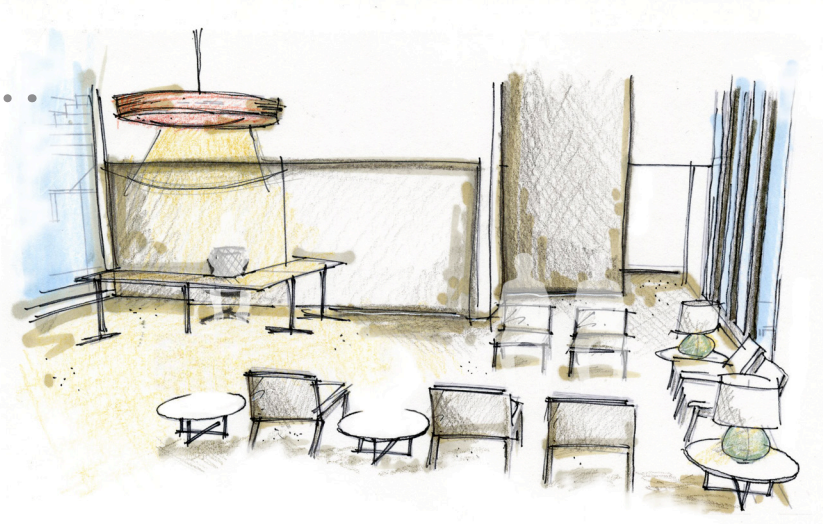
First Floor Redesign

1 Reception
2 Kitchenette
3 Business Manager Office
4 Owner/Bus. Manager Private Meeting
5 Owner Office
6 Conference Room
7 Atrium

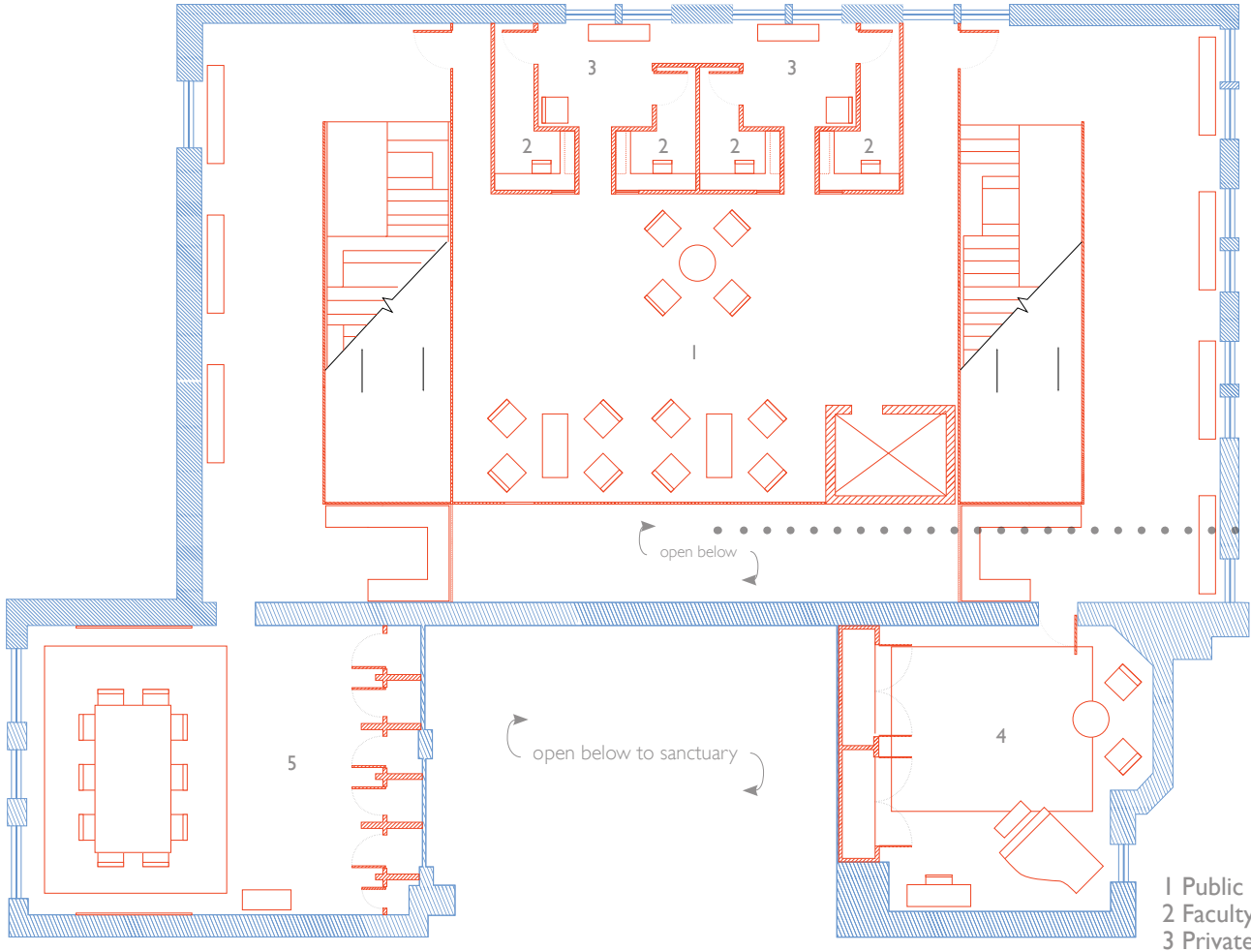
The administration level is the first introduction to the space. Entering in from Ryland the user immediately has the option to use the staircase to go to the basement or upstairs to the faculty level. If the user is unable to use the stairs, the space is easily accessed by the elevator conveniently placed right passed the stair case.

Once inside the faculty office space, you are greeted by a receptionist and plenty of comfortable seating for waiting. The office design is based on design driver # 4. This design allows for privacy but also semi public meeting. Attached to the owners office is the conference room.

The kitchen is located directly behind the receptionist storage area and is is private for staff and faculty. The entire space is clad in glass and privacy is achieved from design driver #5 The Panel system allows for transparency and privacy with the transparent, translucent ,and opaque glass panels.



Design Solution

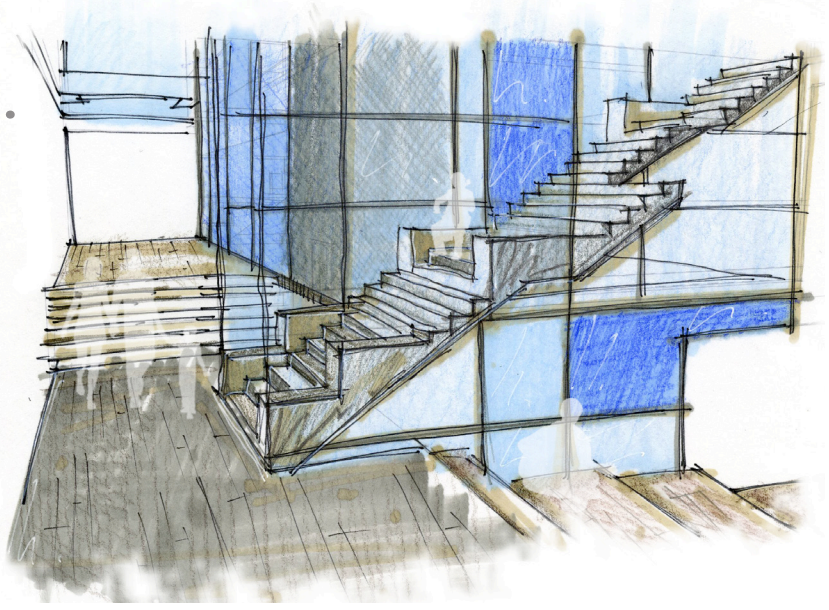


1 Public Gathering
2 Faculty Office
3 Private Meeting for Faculty
4 Private Tutor
5 Conference Room

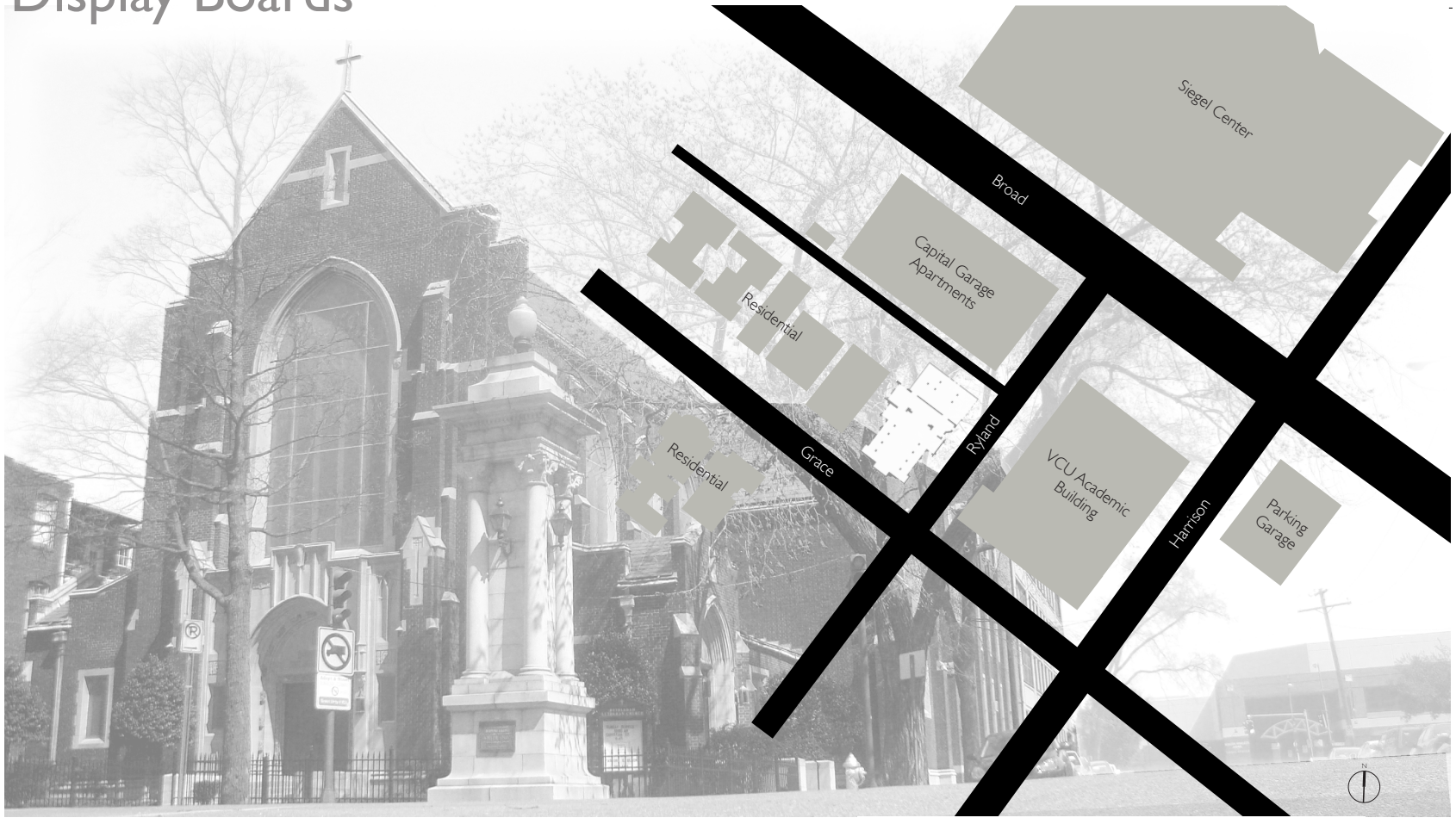
Second Floor Redesign

The office design is based on design driver # 4. This design allows for privacy but also semi public meeting. This space is design to allow the faculty the flexability to meet in a public, semi private, and private space. On the alley entrance side there is a conference space for the faculty, and on the Ryland side, there is an easy access to a private tutor space.

The entire space is clad in glass like below and again, the privacy is achieved through design driver #5. The Panel system allows for transparency and privacy with the transparent, translucent ,and opaque glass panels. This panel system is applied in the same manner on the faculty level where privacy might be more of an issue.



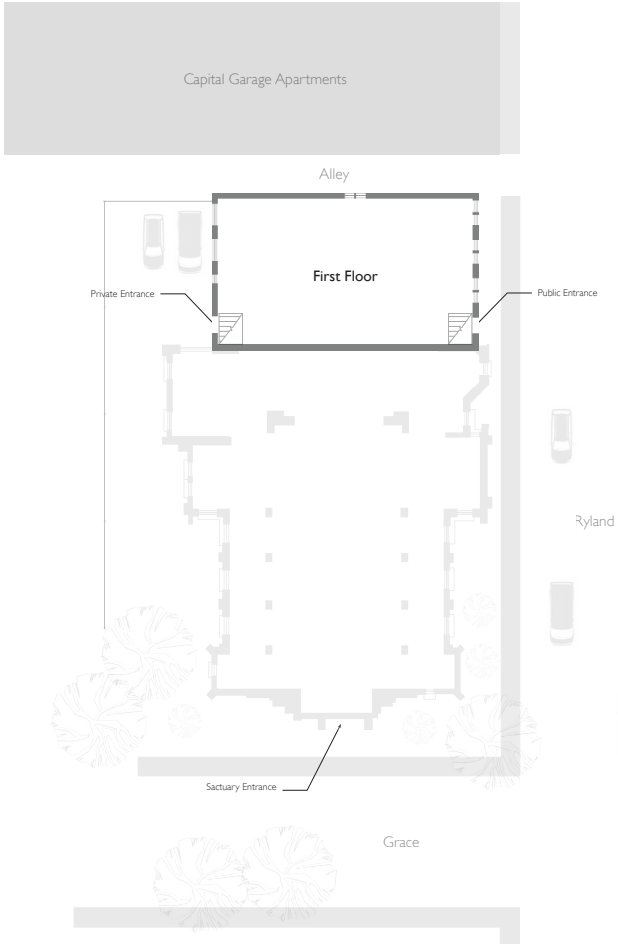
Display Boards

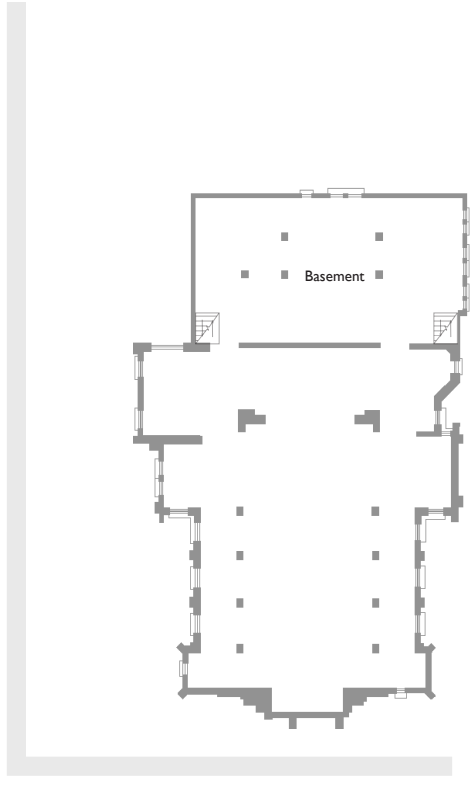


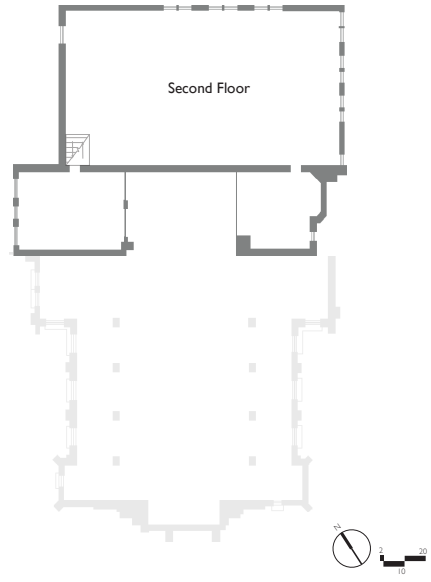
Bethlehem Lutheran Church

1100 West Grace Street Richmond, Virginia built between 1930 - 1931 by Wysong, T. & Jones Architects

Do music education buildings exist only as structures to learn in, or can these buildings operate as facilitators of music education?







Existing Plan

Project Scope

Existing Basement - 8,032'
Existing Second Floor Office - 3,400'
Existing First Floor Office - 3,193'

Total Square Footage - 14,625'

Usage Group: E - 17,818'

Type of Construction: I-A

The existing sanctuary space has been eliminated from the scope of the project in an effort to focus on the design of the basement and back end office area whicth will serve as the primary education and administration areas.

Display Boards

Concept

There is a core message or story that is delivered in a song. The core message is delivered in a melody that is entertaining and interesting.

The central message of a song is broken apart into verses. Each verse relates to the message but has it's own theme that reinforces the meaning of the song.

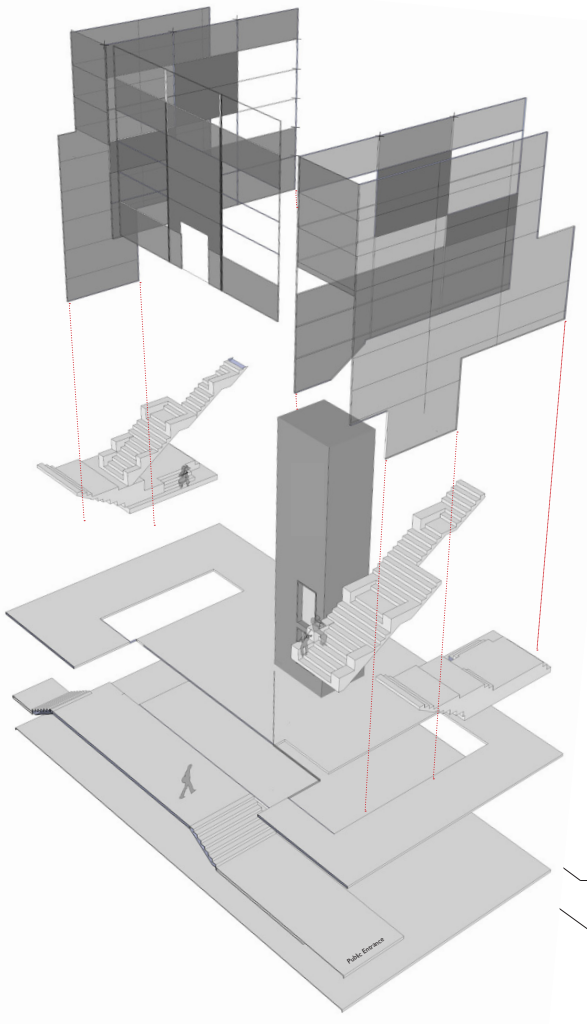
The message of this space is "teaching music". There are 3 levels in this space that all operate to facilitate learning.

The 3 core levels include:

Basement Level - student lounge, practice spaces
Administration Level
Faculty Offices

Each of these spaces, while operating differently, relate and re-inforce the message of the space. The flow of the stairs is what keeps the students, faculty, and administrators interested and engaged in the space to continue learning.

Social Spots on Stairs
Stairs are 10' wide and tapered to 6'at the top



Design Driver
Chord Structure - Guitar

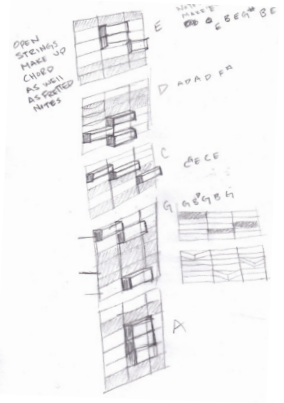
Order is shown here based on the open chord structure of major chords on a guitar.
3 frets and 6 strings creating a grid.

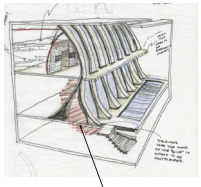
The drawings below depict the tri-tone major chords: E, D, C, G and A.

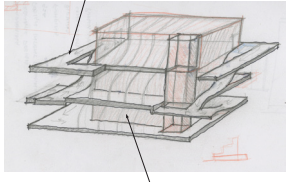
Certain chords have open strings that can be played along with the notes that have to be pressed to create a chord. Other notes cannot be played at all or the chord structure will not be correct.

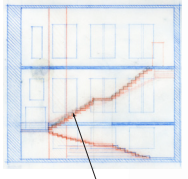
This creates the following rules for this design driver:

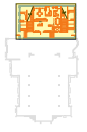
Play - raised **- Opaque**
Don't Play - cut out **- Transparent**
Maybe Play - flat/not cut out **- Translucent**



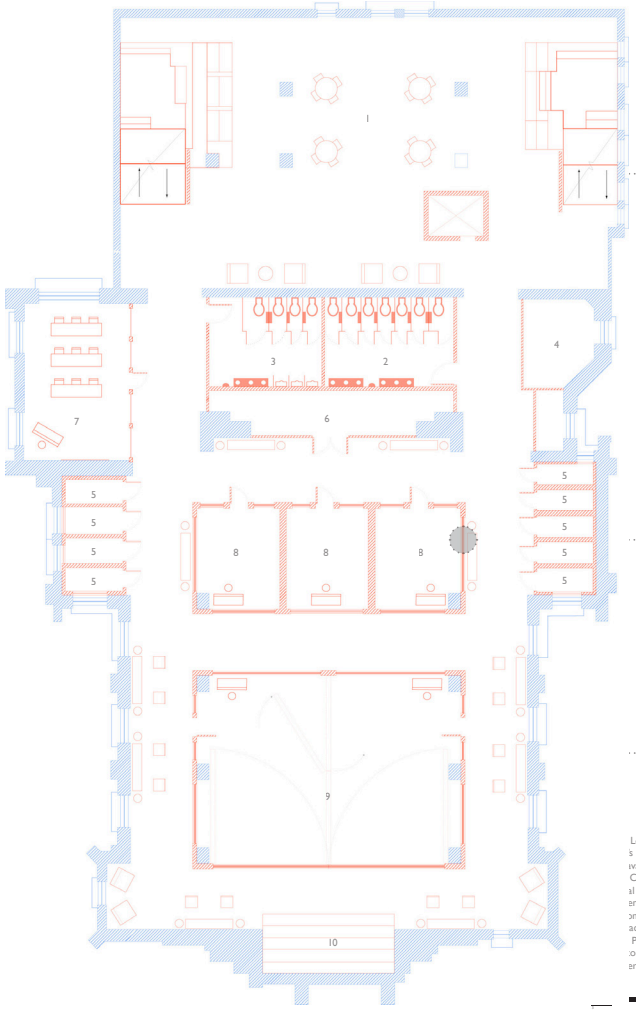

Initial Stair Idea


Developing the Cirrculation of Stairs
Developing the Central Core

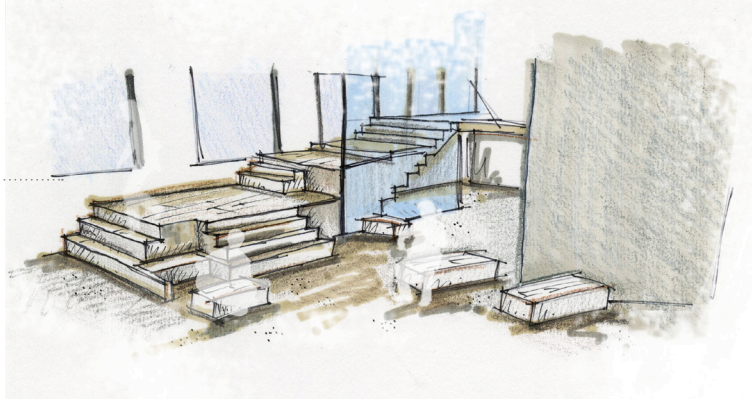

Further Stair Development Into A Socialization Space

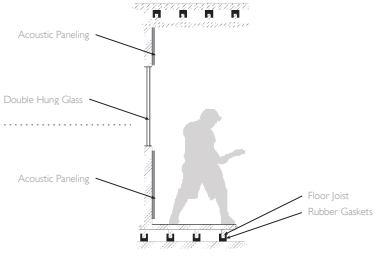


Conceptual



Lounge
s Lavatory
vatory
Closet
l Practice Room
ent Storage
om / with Piano
actice Room / with Piano (5 People)
Practice Room / with Piano(15 People)
o Large Room (30 People)
er System



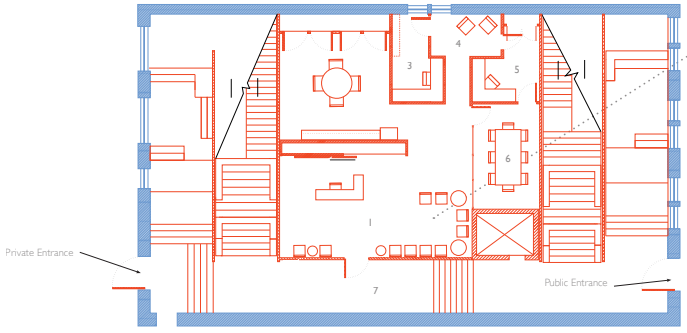


Floating rooms introduce rubber gaskets to floor joists that reduce the vibrations of noise in a room.

This construction method along with sound dampening floors, ceilings, acoustic paneling, and double hung glass, can greatly reduce or eliminate noise to the outside.

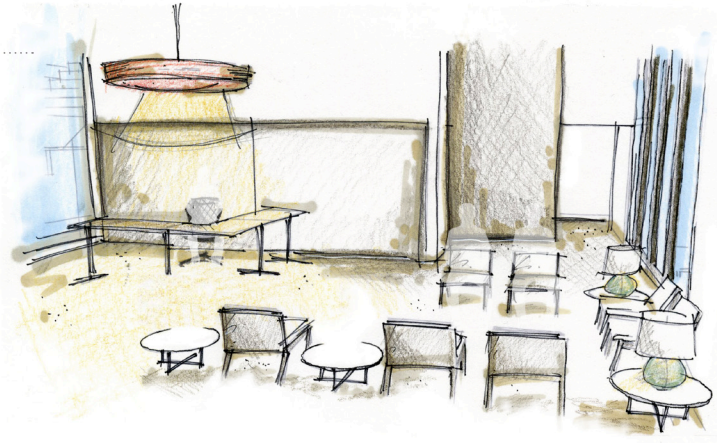
Design Solution

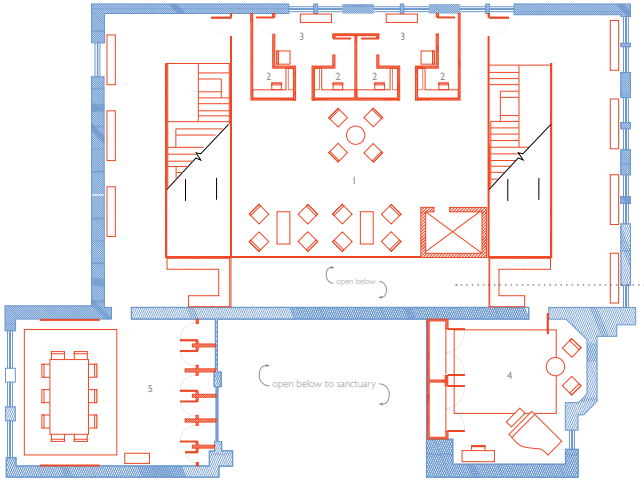
Display Boards



First Floor Redesign

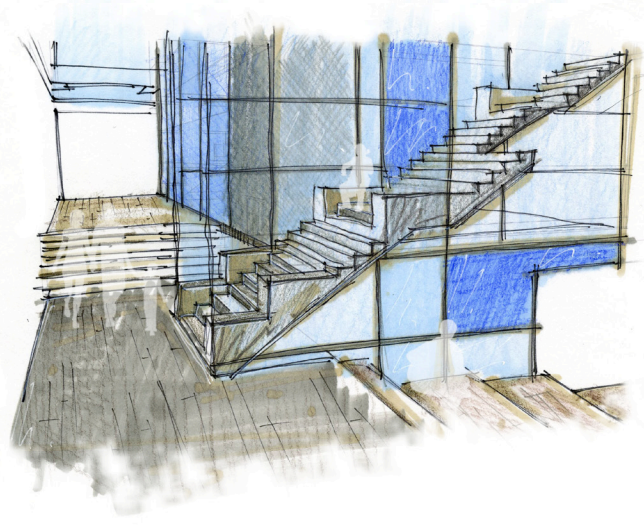
1 Reception
2 Kitchenette
3 Business Manager Office
4 Owner/Bus. Manager Private Meeting
5 Owner Office
6 Conference Room
7 Atrium



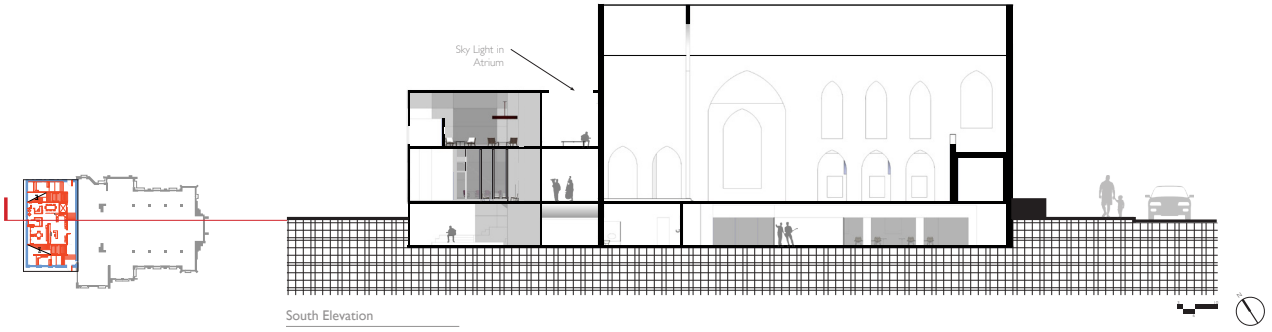


Second Floor Redesign

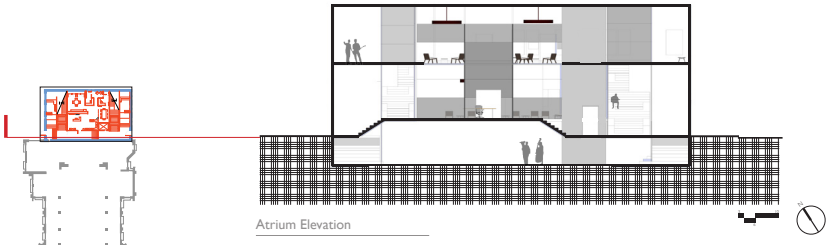
1 Public Gathering
2 Faculty Office
3 Private Meeting for Faculty
4 Private Tutor
5 Conference Room



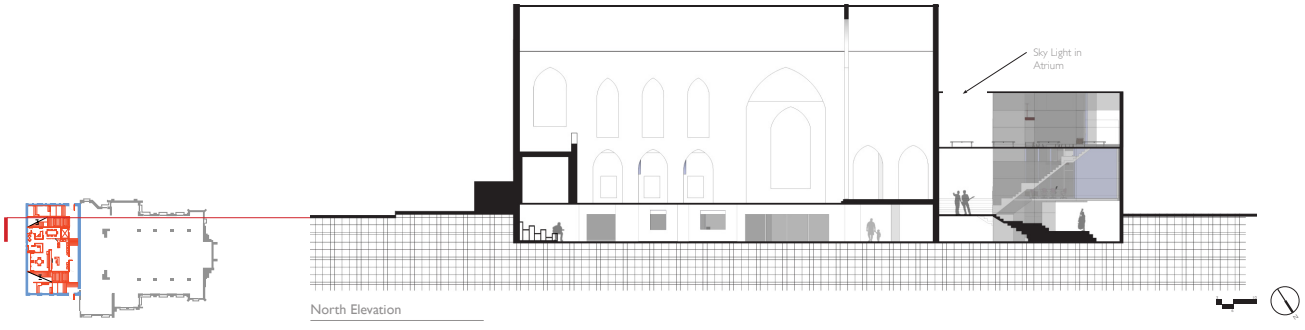
Design Solution



South Elevation



Atrium Elevation



North Elevation

Design Solution

Display Boards

The color palette is neutral and fresh that is juxtaposed with the age of the structure and the rawness of the brick walls. The glass and steel is an injection of a modern aesthetic in an otherwise classical feeling structure.

The furniture selection is another attempt to add a modern conversation in the classically styled building.


Bethlehem Lutheran Church
Existing Plan


Bethlehem Lutheran Church

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